THE ALABAMA
MEDICAL JOURNAL.

VOL. 12. FEBRUARY, 1901. NO. 3

Original Communications.

LACERATIONS OF THE PERINEUM.

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There are some questions that never down—a fact which may be accepted as good evidence that they have not as yet been satisfactorily determined. And strange to say, some of them are of such a nature that one would suppose they would have been settled long ago—once and for all time, and numbered among the professional res gestae. But yet they pop up in every medical meeting; appear regularly in the journals, and also in the text-books. I refer now to the proper care and management of the perineum during labor. This appears to be a very simple matter—yet it is still on the knees of the gods. There has been no lack of opportunities for observation and study—the accumulated experience must be vast and still there is no settled rule of practice. The proposition is entirely a mechanical one, and at first blush a very simple one: a body to be expelled, an orifice through which it is to be expelled, and a force by which it is to be expelled. If the conditions of the proposition were always the same the problem would have been solved long since, and the difficulty arises right here in that the conditions are never always the same, variations depending upon tissue, characteristics of the individual, conformation of each head, and difference in the expulsive force. One case may require no assistance whatever, another need delay of the head and perineal support, another demanding lateral or bilateral incision (episiotomy), etc., and the consequence is that there are as many "plans" as there are practitioners. Some men, and distinguished

men, too, maintain that the perineum needs no attention, and if left entirely to nature lacerations would never occur. The vast majority of labor cases in our State receive just such treatment, or rather no treatment—and yet accidents of this kind seldom come to our knowledge. It does not follow from this, however, that lacerations do not occur. These unfortunate women patiently accept such results as the ordinary consequences of child-birth, and say nothing about them. There must be an immense amount of suffering among parturient women in the country which never comes to light. Just the other day a medical friend told me that he had very recently been called to see a woman who had been under the care of an ignorant midwife for days. Upon examination he discovered an arm presentation and a ruptured uterus—the patient being moribund when he saw her. I would never have heard of this case except for an accidental meeting with this gentleman. Think of the hours and hours of intense and unnecessary agony these poor people must endure—and of which they might be so easily relieved. It would be very interesting to know the proportion of lacerated perineums occurring in these neglected cases—but I know no way of ascertaining it. At guessing one man is as good as another, but I believe it is very large. The advocates of this do-nothing policy comprise a very small minority of the profession, and will discover sooner or later that the well known reputation of the middle of the road for safe traveling is not an unmerited one. A few such experiences, as the following, would prove exceedingly interesting and highly instructive: "Two of the most severe lacerations that I have ever seen were in women who were brought into this hospital, one of whom was delivered in the street, and the other in the police station house. An instructive incident occurred to a teacher of midwifery in this city, while lecturing on this accident to a class of medical students by the bedside of a woman in the last stage of labor. He said that he had never known a case of severe laceration of the perineum except when it had been well supported. His experience was then and there somewhat enlarged, for, while he was yet talking, the woman had a severe pain, by which the head was delivered, and it was found that the perineum was torn down to the sphincter."—The Puerperal Diseases by Fordyce Barker.

These conservative gentlemen, however, might give us a Roland for our Oliver by quoting another case which is also quite instructive: "The chief rule laid down by the great majority of obstetric writers is the support of the perineum by the hand during the passage of the head and trunk. The late Dr. Hamilton stated that he had supported the perineum for nine hours together, without intermission! Now I confess I do not know a more absurb situation than that of an

accoucher, doomed to squeeze the sphincter ani for hours together. I believe this plan to be well nigh as useless as it is absurd—in fact, it seems a true reliquum of the midwife, and it would be no small boon to obstetrics to relieve it from such a barbarism altogether."—Tyler Smith on Parturition.

History fails to record whether or not Victory perched upon the banner of this medical Job, but I sincerely hope that it did; and as the man of the land of Uz was rewarded by a two-fold increase of his cattle and goods let us hope that Dr. Hamilton had the pleasure of delivering twins with an intact perineum—and received, in addition, prompt payment and a fat fee!—for he gives twice who gives quickly. If the do-nothing plan is far from infallible it is equally true that the meddlesome man does not carry the safety of the perineum in the hollow of his hand. I have had men to tell me that they never had lacerations in their practice, and one gentleman went so far as to say that he would never employ a physician who had. Cheering and comforting words, indeed, to a man who confesses to having had his full share of them—and never approaches a case without apprehension of adding another to the list! It has long been one of the minor desires of my life to follow these gentlemen with a good light and a wad of cotton. I am confident I should soon get all the revenge one could reasonably desire—and certain persons would thereafter be what the Spanish call incommunicado on the subject of ruptures. It is not my intention to copy Gray's Anatomy, and enter into a description of the perineum. Every one is supposed to be familiar with the muscles and other tissues of these parts, or can readily become so: I simply wish to consider this important subject from a practical standpoint and in a familiar and informal manner—in the sincere hope that this brief and discursive review may be helpful or suggestive to some one who, like myself, occasionally meets with this accident. And by the way I have no hesitation in saying that the lectures upon this subject by Dr. Fordyce Barker in his work, The Puerperal Diseases, easily surpass anything I have ever read in this connection. They show the hand of the master he was—and no one really interested in it can afford to do without them.

VARIETIES OF LACERATIONS.

Dr. Barker accepts the classification of Baker Brown, who divides lacerations into four varieties:

1. When the perineum is torn to the extent of an inch or less from the fourchette. This is of no moment and requires no treatment.

2. When the perineum is torn between the constrictor vaginae and sphincter ani—more correctly a perforation as the muscles remain uninjured—children have been delivered through this opening.

3. When the laceration extends from the fourchette to the sphincter.

4. When the laceration extends from the fourchette down to and through the sphincter ani and perhaps some distance through the rectovaginal septum.

There are, of course, lacerations of the vagina of different kinds and degrees—close akin to perineal ruptures, but they cannot strictly be classed among the lacerations of the perineum. They require immediate surgical attention, but are, unfortunately, frequently overlooked, and are sometimes, in fact, difficult to find. A prompt repair, by the insertion of a few sutures, would well repay the trouble of a careful search—and possibly remove a source of dangerous infection.

I have already spoken of delivery as being a mechanical proposition —a body to be expelled, an orifice through which it is to be expelled. Laceration may be produced by each one of these factors as a predisposing and proximate cause, or may be the result of the combined action of two or possibly all three of them. It is Denman, I believe, who insists upon the mechanical basis of the obstetric art, but Tyler Smith, although admitting that it exercises a subordinate part, maintains that the true basis is the nervi-motor, and that the pathology and treatment of ruptures and lacerations are referable to this principle. In my humble judgment I think Denman has the best of the argument. It strikes me that the mechanical principle comes first—and it is the exciti-motor which holds the subordinate position—making the difference, in fact, between animate and inanimate matter. For instance, a wooden ball passing through a wooden orifice is purely mechanical —an infant's head passing through the vaginal orifice is more than mechanical. The pressure of the head upon the perineum excites uterine action—increases the expulsive force—causes changes to occur in the perineal tissues; but the process is at last essentially mechanical. If this reasoning is correct, and I think it is, the conclusion is irresistable, but I must do Tyler Smith the justice to say that he had reference to the whole subject of practical midwifery, although he specially includes lacerations. In discussing the influences of these factors in the production of ruptures I shall speak of them as briefly as I can, and in the order in which I have enumerated them. There are many ways in which the foetal body might contribute to laceration of the perineum, and in order to avoid an unnecessary multiplication of divisions and at the same time reduce them to as small a number as is compatible with clearness and practical utility I shall accentuate only those which are most frequent and important.

1. The size of the head, or breech, and we might include here, also,

the shoulders. Of course in considering the size of these parts "the excess may only be relative as compared with the vulva."

2. The compressibility, or the contrary, of the presenting part. A head of large size in which the bones are movable and overlap readily would pass more easily than one which was firm and unyielding on account of advanced osseous development. And I would remark here although I do not remember ever having read it, or heard it mentioned, that a dead foetus is more likely to produce a rupture than a living child. It is an inert mass, without resiliency, and is with difficulty molded into favorable shape for easy passage. The experience of a single observer is too limited to establish this observation as a fact, and I only mention it as an impression of my own.

3. Abnormal positions of the presenting part. These are too numerous for description in a Journal article. The next best thing to knowing a thing is to know where to find it, and for this information I would refer the reader to Barker's Work, The Puerperal Diseases. He treats the subject in a most lucid and practical manner.

I shall pass on now to the consideration of the peculiarities of the orifice as favoring perineal lacerations.

1. Size—I have seen it stated somewhere, but I cannot now recall the authority, that the vulva of a woman is about equal to the size of her mouth. This may or may not be a fact. We know, however, that there is a great difference in the size of the vulva, and this without regard to the size of the individual. An unusually small vulva is more apt to suffer injury than a large one.

2. The anatomical structure of the perineum. Some perinei are thin and elastic, others are thick, with a large amount of adipose tissue in their structure, and are disposed to tear, rather than yield to a dilating force.

3. Pathological condition of the perineum. As every physician knows the perineum some times becomes hot, dry and irritable. Especially is this the case after the escape of the amniotic fluid and the head has pressed for some time upon it. It becomes rigid and contracts tightly about the presenting part. Frequent digital examinations make it many times more so. A young practitioner once had a case of this kind, and sent for an older one to assist him. The latter observing that the former, in his anxiety, made very frequent examinations, ordered a hot poultice to be applied over the parts. Very much to the surprise of the young man the infant was soon born. The older man was asked why he had ordered the poultice. The reply came promptly, "Simply to keep your damned fingers out." I cannot say that the young man went away sorrowful, but he was certainly a wiser and

much-relieved young man. We know it did more than that. The moist heat soothed and relaxed the irritable nerves and tissues, and by reflex action increased the expulsive efforts of the uterus.

The third factor force need not detain us. It is only when the contractions of the uterus and the muscular efforts of the mother act too vigorously at the wrong time, before the canal of exit has been prepared by sufficient and proper dilatation, and when the peculiarities of the presenting body threaten serious injury.

We now come to the pith and marrow of the subject, and the purpose for which I have prepared this paper. I will first ask this question, Is laceration of the perineum always an avoidable accident in the hands of a skillful and competent practitioner? "When it occurs the young practitioner generally blames himself for not having been sufficiently assiduous in its protection." He need not, for he has most illustrious company. I cannot find a single obstetrical authority who does not confess having had such an occurrence in his practice. Denman, the most candid of men, admits that "one of the most desperate cases of laceration he ever had, was in a lady with whom he had been most assiduous in his endeavors to prevent it." And Rigby, who never had a superior, says, "To say, however, that laceration of the perineum need never happen would be preposterous; because cases every now and then occur, where, from the contracted and unyielding state of the os externum, and from the size of the child, it is nearly impossible that the perineum can escape without injury." It is unnecessary to multiply authorities as the testimony of all is to the same effect. "The prevention of this accident is always an object of solicitude to the accoucher, even in the most perfectly natural labors."—Tyler Smith. If it was an avoidable accident it would not be an object of so much concern, and its occurrence is not a reflection upon the qualifications or professional ability of any man. It is, nevertheless, true that these accidents occur more rarely in the hands of the careful and capable than in the hands of those who are neither. It will not avail the latter to say that the past-masters had them; for, with the public, nothing succeeds like success, and a series of such mishaps will assuredly be followed by criticism and censure. Madam Grundy can safely be trusted to tell how Mrs. Blank "was torn" upon this occasion and upon that occasion. This tempts some men not to look for them, in the hope that they may remain undetected, when their consciences tell them that they should investigate carefully, and give the woman the benefit of immediate repair should a rupture be discovered. I know, from experience, that it stings a little to have to tell a patient that she has suffered laceration, and that she must be sutured at once.

But in spite of the Grundies, it is the correct and manly thing to do, and will at least secure the mens sibi conscia recti. A man may be a star graduate and perfectly familiar with the theory of the mechanism of labor, but experience alone can give him the manual dexterity necessary for the proper management of the perineum. I would advise a young man first entering practice and who finds that he meets with an uncomfortable number of these accidents, to apply to some older physician to instruct him in the practical care of the woman at this critical period of labor. A few demonstrations would beat the books hollow, save him from much personal mortification and spare women a tedious and serious surgical operation. The old practitioner will feel complimented by his request, and I will stand surety that he will cheerfully do his best for him. After that he may, with impunity, rupture every perineum in town, and the old man will stand manfully by him. It is a great mistake for a young practitioner to conceive the idea that the senior members of the profession are always ready to criticise and demolish the juniors. Nothing is farther from the truth. I knew an old man, of blessed memory, who used to say with pride that he had never, in his long life, injured a young man by word, deed or shrug of the shoulder. This last says so little and yet says so much. I believe this sentiment represents the attitude of the vast majority of the older and reputable men of the profession.

We come now to the last and most important question of all. What are the best methods of avoiding a laceration of the perineum? As I said in the beginning of this paper, there are almost as many methods as there are men—and I tried to explain why. But there is one plan which has been recommended by every authority from Chapman, who wrote the first work in English, down to the last ten years with, so far as I know, one single exception—Tyler Smith. Of course I refer to manual support of the perineum. It has been regarded by some as almost infallible, and universally recommended until the appearance of some of the more recent writers of text-books. Tyler Smith alone, among the older writers, condemned it unsparingly, and claimed that the only good accomplished by it was the delaying of the birth of the head and shoulders. Modern authors seem inclined to take this view of it also, and for the following reason: "But I can imagine no other beneficial effect (delay) from this practice. Suppose a trouser so tight that the knee could not be bent without tearing it, would pressure on the knee prevent the tearing?"—Difficult Labor: Herman. Even the older accouchers recommended the support to be so applied that the pressure resulted in delaying the birth rather than in mechanical support of the parts. When the head presses against the rectum then it must be

forced up by pressure through and against the perineum. In other words it must be lifted. The late Prof. Goodell advised that where danger to the perineum was imminent that a couple of fingers be inserted into the rectum, the perineum be pulled forward, and slipped over the head during an interval between pains. Fordyce Barker resorted to this plan, and was highly pleased with the results. It has not, however, passed unchallenged and uncondemned. "Putting the finger in the rectum to press the anus forward is injurious (for you may injure the rectum) and does no good, for the perineum must, whatever its position, dilate enough to let the greatest circumference of the head pass."—Herman. Others have objected that it is fatal to asepsis. But it is difficult to discard what Goodell has advised, and Barker found valuable.

It is impossible to examine one tenth of the various methods advocated or endorsed by high authority, and I shall content myself in concluding these remarks by giving my own experience, and describing the methods I believe to be best after a careful study of the subject and many years of practical experience.

First of all, then, abstain from frequent digital examinations as these serve to render the patient nervous and materially diminish the natural lubricant of the passage. If the perineum is hot and dry apply hot and moist applications to the parts, and nothing is better for this purpose than soft old towels wrung out of hot water. Ointments and other oleaginous preparations, medicated or not, can be of no possible service. I have recently seen mixtures of ether, chloroform, menthal and so on recommended as really useful applications, but I have no personal knowledge of their value. If the perineum, in spite of such treatment, continues rigid and irritable anesthesia and possibly the short forceps may become necessary. Be careful to keep the bladder and rectum empty in order to avoid obstructive and reflex effects. If the uterine contractions are too vigorous and the muscular efforts of the patient too active, administer hypodermics of morphia or, perhaps, even ether or chloroform. When the birth is nearing completion press the head gently during a strong pain, and direct it well up under the pubis, so as to take the full force of it off the perineum. I should probably have said before, that the "bag of water should be preserved as long as possible, but it has most likely ruptured spontaneously before this stage of labor has been reached. The "bag" is a hydraulic wedge and especially useful in first labors. If possible smooth out the corrugated scalp, and work the perineum over the head during an interval between pains. Receive the head upon your hand, refrain from pulling in attempts to complete the birth, and wait pa-

tiently for the renewal of the pains. Pass a finger up, and if the cord is tight around the neck of the child, pull it carefully down and slip it over the head. It may be found to be wrapped several times around the neck. Now a minute seems an hour, "the face swells and grows purple from the pressure upon the neck, although it does not necessarily result from the cord being round it." An inexperienced practitioner is apt to become excited, and, alarmed for fear of asphyxiation of the child, instinctively resorts to extractive efforts, and the slightest rupture is likely to be converted into an extensive laceration by the rapid delivery of the shoulders. Let him keep cool. The child is in no danger; and if he was in China the baby would be born without injury, and if he is going to become excited it would be better for the perineum if he was in China. Right here I have had most of my lacerations to occur. The head has often passed with a whole perineum, but excitement and haste to deliver resulted in a laceration for the mother and mortification for myself. Wait patiently. Very soon a pain will come on, the perineum will begin to round out, and you have only to repeat for the shoulders what you have done for the head; delay too rapid delivery by gentle pressure, and manipulate it so as to cause it to glide under the pubis. When there is cause to believe the perineum in special danger it should be kept under constant ocular observation, preferably with patient lying on left side. When rupture appears inevitable incisions must be resorted to. As I have had no personal experience in this operation I shall copy the technique of it, from the American Text-Book of Obstetrics, as it may be of service to some one. "The only instrument required, in addition to what is carried in the usual obstetric outfit, is a blunt-pointed tenotomy knife. When laceration seems inevitable or even probable, the cord-like ring, which can be felt about half an inch above the tense border of the vulva by examination during a pain, should be divided. Locating the existing girdle by the finger, the knife is passed flatwise between the head and the vaginal wall. The edge of the knife is then turned outward and the ring incised. The operation is repeated on the opposite side. The length of the incision should be about an inch, its depth a quarter of an inch, and its location about one-third way from the posterior to the anterior commission when the parts are on the stretch." Again, "Most essential is it that the cuts be made parallel with the long axis of the mother's body, not with the vaginal axis." This saves the perineum and more important still the sphincter and possibly the rectum. It heals more rapidly than the usual rupture and should be treated, also, by proper suturing.

After delivery examine every case most carefully—first the perineum, and then the vagina. Some times in spite of the most careful and pains-

taking management you will find a laceration. If so, what? Repair it immediately! No man's skill can always prevent a laceration, but every man's honesty can make him do what is best for the patient after the occurrence of one. A small number of capable men yet maintain that by keeping the limbs of the patient tied together and the parts in a cleanly condition that the otherwise unaided efforts of Nature will bring about results equally as good as could be procured by an immediate, or primary, operation. They further insist that such an operation is most likely to prove a failure, and even cause pockets to be filled with decomposing discharges and thus produce a direct menace to the safety of the patient. In primiparae, and especially in women over thirty-five, lacerations occur most often, and "the anterior margin of the perineum, called fraenulum, is, we believe, almost invariably ruptured in every first case; but the laceration ought not to extend further." (Rigby). Such is the experience of Barker and many others. It may be safely accepted as a rule of practice that a rupture which does not extend further than an inch may be left to nature, cleanliness and binding of the limbs. The results are surprisingly good, and as the older writers remarked the perineum is left in a more favorable condition for the next time. But a rupture which extends an inch or more should receive surgical attention. For a time I held the opinion myself that a primary operation was very unpromising, and that nothing would be lost by waiting for the later operation. This I eventually discovered was due to the fact I did not perform it properly—being misguided by the light manner in which the Text-Books of my day referred to it. They would advise that it should be left alone—or perhaps that the gaping wound should be brought together by a few sutures—and by no means impressed upon the student the necessity of thorough surgical work. I took them at their word, put in a few stitches which did not reach the bottom of the injury, and, when the same were removed a week or ten days later, the laceration would gape open—and apparently no appreciable good had been accomplished. It requires a great deal more than the insertion of a few stitches while the parts are still benumbed by the birth of the child. It requires indeed full anesthesia, and all the safeguards and careful attention that any other serious surgical procedure demands, and without which a successful result is out of the question. A recognition of this fact has left but few opponents to immediate operation, and an attendant is now held even culpable who neglects to give his patient the benefit of one. Should the operation prove to a large extent unsuccessful no harm can come of it, and, on the contrary, some tissue must be saved to the distinct advantage of the sufferer. It will, at least, give the gynecologist less to do, if not less to talk about. The latter some times animadvert and prophesy

to their own confusion. I know a lady who consulted one in a distant State, and was told that during her confinement she had suffered a laceration of the cervix, and that she would never become pregnant again. Soon after her return home she began to enlarge to the great distress of her husband and friends, who feared that the same was due to a tumor. When I expressed the opinion that the enlargement was owing to natural causes I was reminded of the statement of the "specialist," and I could see that my opinion was not very re-assuring. I was triumphantly vindicated, however, by the birth of the "tumor." I once heard a gynecologist say that laceration of the cervix is an accident that should never occur. I wish he would instruct me how to prevent it. This is not the yelp of " a hit dog," and I only mention them to show how cautious these gentlemen should be when they speak in the presence of the friends of patients who are sent to them. Such observations are understood by the latter as reflections upon their medical attendants whether or not they so intend them. There was a lady who did me the honor of sending for me from time to time, and I remember prescribing for her upon one or two occasions for attacks of indigestion. For some reason she visited New York City, and while there consulted a physician for pelvic pain. After making an examination she was informed that she had cancer of the uterus, and could not live much longer. He also communicated another piece of information to her; that her medical attendant should have discovered this condition long ago. Now how is it possible to diagnose uterine cancer by simply passing a lady on the street? She never called my attention to local pain or discharge of any kind. In fact, I never saw her more than two or three times in two years, and then only for headache and sick stomach. The consequence was that this lady cut my acquaintance. When she asked him why doctors in the South could not discover such diseases she was told that they paid too much attention to politics and religion. And this man was no quack either. Surely his sight would put the X-ray to the blush! All this, I am aware, has nothing to do with lacerations of the perineum, but it has something to do with those who undertake to remedy them. My object is to impress the young practitioner—and I have prepared this paper in hope of being of service to such—with the necessity of being entirely at home with this operation and of doing his own surgery. It is among the humbler operations, nothing dazzling about it, but it is one of the utmost importance to the general practitioner. Should he take a post-graduate course I would advise him to give it his most earnest attention, and I will guarantee that he will never regret it. The fact is a man is not competent to practice medicine who is not prepared to repair perineal lacerations and operate for the relief of

appendicitis. This is especially true in our Southern country where our people are too poor to procure the services of a recognized general surgeon, and if they could afford the expense it is difficult, and at times impossible, to obtain their services. A few hours will often make the difference between life and death. The result is that in the latter disease the issue, in a vast majority of cases, will necessarily depend entirely and absolutely on the pluck and capacity of the general practitioner, and it is his duty to be ready to meet the responsibility of his position. Nephrectomies, ovariotomies and other sky-rocket operations he may leave to others, but these two, of which I speak, time will not allow him to shift upon other shoulders. And, fortunately, any man of fair intelligence can qualify himself to deal successfully with any case that is not most unusually complicated.

Another important question. Is the perineum the floor of the pelvis? In other words, does the perineum support the uterus in position, so that its destruction would cause prolapse? I think ninety-nine men out of a hundred would answer yes, and I think this answer would come pretty near the truth. Some maintain, however, that such is not the case, that the perineum is in so true sense a support of the uterus, and that prolapse should not occur by reason of its injury. But all admit, I believe, that any considerable weakening of it would result in imperfect involution of the vagina and uterus. This would be a good place to remark that things which were equal to the same thing are equal to each other. I imagine we have all seen extreme procidentia in old, neglected cases of lacerated perineums, and conditions, also of extreme discomfort, veritable opprobria Medicorum.

As I have said before the older writers direct that the injury should be repaired, but do not impress upon one the gravity of the operation nor give detailed directions in regard to it. Recent authors describe the operation very carefully, yet there is some difference even among them as regards minor details. For instance, in directing the point at which the needle should be entered. Herman says (Difficult Labor) "Enter the needle through the skin of the perineum as close as you can to the raw surface." Reynold's (Practical Midwifery) says, "Enter through the external skin a little in advance of the anus and three-quarters of an inch from the median line." The latter recommends a full curved needle, the former a half curved needle, and both of them give a full and thorough description of every step in the operation. After delivery examine every case carefully—first the perineum and then the vaginal walls. If a laceration be discovered repair it at once, and to do so it will be necessary to anaesthetize the patient. Douche the vaginal canal with a warm antiseptic wash—mop it dry—and pack the upper part of the canal with gauze or absorbent cotton so as to

keep the field of operation clear of blood. If the tear extends into the vagina, bring it into full vision by tenacula and suture that part first. When you come to the perineum it will not be necessary to trim or freshen the wound if not more than twelve hours have elapsed Enter the needle and see that it goes to the very bottom of the wound, and bring it out at the same distance from the edge on the other side and be sure that the walls of the laceration come exactly together. The stitches ought to be about one-third of an inch apart and in tying remember the inevitable swelling of the parts. If the sphincter is torn a separate suture must be carefully adjusted to keep it in proper position, and the parts must be kept as clean as possible. The suture may be of any material which is stout enough to hold the wound together. If it be a simple laceration of the perineum chromisided cat-gut will answer every purpose and will not require to be removed. If there be any reason to appehend too much tension on the sutures they may be tied over quills or pieces of bougie, or the hare-lip suture may be resorted to with advantage in some cases. But remember that strangulation of the tissues may defeat an otherwise most promising operation. I am fully aware that there is nothing original in this article. Originality is not my object. If I can impress upon a young man the necessity of attending to this plain, but much neglected duty, I have accomplished my purpose, and I say to him in conclusion, avoid a laceration if possible, but should it occur, admit it like a man, and repair it like a surgeon.

SUPPURATIVE PLEURISY, SPLENIC MYELOGENIC LEUCAEMIA.

CLINICAL LECTURE DELIVERED AT ST. VINCENT'S HOSPITAL BY B. L. WYMAN, A. M., M. D.,

Professor of Neurology and Clinical Medicine, Birmingham Medical College and Visiting Physician to St. Vincent's Hospital.

Gentlemen:—I have the privilege of showing you this afternoon several interesting and instructive cases. The first patient which I shall present is suffering with a disease which is frequently met with at this season of the year and especially when epidemic waves of la-grippe are spreading over the country. This case is of special interest to those of you who expect to engage in general practice and I shall therefore give you the history so far as we have been able to obtain it from the beginning of his illness until the present time. This man is forty-six years old, a widower and a carpenter by trade. His father died at the age of sixty with carcinoma of the stomach and his mother with dysentery at seventy-three years of age. There is no history of

tuberculosis in his family. He had typhoid fever some years ago and one attack of lagrippe five years ago. With these exceptions he has always enjoyed good health until the present attack began, about seven weeks ago, when he complained of chilly sensations, pain in his chest, accompanied by cough and fever. From his description of his symptoms I believe he had in the beginning an attack of lagrippe. He gradually grew worse and had to take his bed and was finally sent to the hospital for treatment. He was admitted on Jan. 1st with a temperature of 101, pulse 110 and respiration 30. He complained of pain over the right lung, accompanied by a severe cough. Physical examination revealed marked dullness on percussion over the lower lobe of the right lung both anteriorly and posteriorly. Upon auscultation bronchial respiration and bronchial voice was heard over the lower lobe posteriorly. There was also observed friction sounds over a considerable area of the affected lung. The diagnosis of pleuro-pneumonia was made and the patient was put on the ordinary expectant plan of treatment.

If you will examine the temperature chart, which I shall pass around, you will notice that his temperature ranged during the first week or ten days between 101 and 104, with a corresponding increase in the pulse and respiration. On the morning of the seventh day his temperature was 99, but soon rose in the afternoon to 100 2-5. Nothing unusual occurred until the tenth day after admission; he suddenly, during the night, became intensely jaundiced. About this time he complained of severe pain and soreness over the right lung in the mid-axillary line. The jaundice disappeared entirely after one week and as you see him today his skin shows no discoloration. It must be remembered that jaundice is one of the complications of croupous-pneumonia and when it occurs it is regarded as a serious symptom. The cause of it is somewhat obscure and various explanations have been given. Some authorities believe that it is due to catarrh of the bile ducts while others say it is a hematogenous jaundice and results from re-absorption of the haemoglobin derived from the disintegration of the red blood corpuscles in the exudate in the air cells. It has also been ascribed to a haemolytic action of the diplococcus lanceolatus. Unlike other patients in the same ward suffering with croupous pneumonia this patient did not reach a crisis and while his temperature declined about the tenth or eleventh day it soon rose again and has continued to pursue an irregular curve and this symptom has been accompanied by profuse night sweats. The physical signs have also undergone very marked changes, but as we will examine him before you I will not anticipate what we shall find. This man evidently has something more than a simple pleuro-pneumonia. There has evidently

been some complication which has retarded his convalescence, and we shall endeavor to find out what it is. You must remember that croupous pneumonia reaches a crisis between the fifth and the tenth day and whenever convalescence fails to begin after this period, you must look for some complication. We shall now make a physical examination of this patient's chest and see what it reveals. Upon inspection of the chest wall you will observe a decided fullness on the right side and slight bulging of the intercostal spaces. You will also notice that there is very little expansion on that side. Upon palpation over the right lung we find entire absence of vocal fremitus over the lower lobe of the lung extending as high as the third rib, both anteriorly and posteriorly. On percussion beginning at the apex we find normal or slightly exaggerated resonance, until we reach the third interspace when the percussion note changes, and we find very marked flatness extending to the base of the lung both in front and behind. Upon auscultation we find an entire absence of all vocal and respiratory sounds in front until we reach the third interspace when the vesicular murmur is heard. Posteriorly we find the same physical signs except that breathing of a bronchial character is heard behind at the angle of the scapula. I call your attention to this particularly because the rule as laid down in your text-books that there is complete absence of all vocal and respiratory sounds in this class of cases should not be accepted as absolutely true. The bronchial respiration in this case is due to compression of the lnng.

From the clinical history of this case together with the physical signs you ought to have no difficulty in arriving at a diagnosis. The man's temperature today is 101 F., the pulse is rapid and small. The physical signs point unmistakably to a collection of fluid in the right pleural cavity of considerable extent.

The question of treatment will depend largely on the character of the case and the amount of the effusion. There is very great difference of opinion among various authorities as to our ability to absorb these effusions without operative interference, and also as to the time for operation and the amount of fluid demanding interference. Personally my experience has been that there is very little reliance to be placed in the use of drugs to stimulate the absorption of pleuritic effusions. If the fluid accumulation is small and occasions the patient very little difficulty in breathing and no interference with the action of the heart, there is no objection to the use of remedies, but as a rule the results of these remedies are unsatisfactory, especially when the effusion is large. In this case we would not be justified in wasting time on medicinal measures as the patient complains very much of difficulty in breathing, has a daily rise of temperature, followed by profuse night sweats. We shall therefore proceed at once to aspiration.

In all cases whether the effusion be large or small if there is any interference with the action of the lungs or heart the chest should be aspirated without any delay. From the irregular temperature and night sweats I am of the opinion we have here a case of suppurative pleurisy or empyema and not one with a simple serous effusion. As to the amount of fluid which should be removed, it is best to remove as much as possible at each aspiration gauging the amount by the sensations of the patient. Every physician should be able to aspirate the chest and while the operation is a very simple one there are some points which should be remembered. Some authorities recommend that the needle should be introduced between the eighth and ninth ribs in the line of the angle of the scapula, as in this region there is less danger of wounding adjacent organs. Others introduce the needle in the seventh intercostal space in the mid axillary line. The latter is the point I usually select as we shall do in this case. The arm on the affected side should be carried over to grasp the opposite shoulder in order to widen the intercostal space. The needle should be introduced close to the upper margin of the rib in order to avoid wounding the intercostal artery. The skin should be rendered aseptic by soap and water and alcohol or ether. Local anaesthesia can be produced by the application of ice and salt or by the injection of a few minims of a 4 per cent.solution of cocaine. Great care should be exercised in preventing the introduction of air into the pleural cavity.

We will now introduce a sterile needle in the seventh intercostal space in the anterior axillary line and you see the fluid flow freely. We will remove as much as we can and when the patient complains of constriction of the chest with a tendency to cough, which he cannot repress or complains of pain in the chest, we will stop. The fluid in this case is bright yellow and it evidently contains a large amount of pus—in other words it is as we anticipated an empyema. It is always well before aspiration, especially in nervous patients, to give either a 1-6 or 1-8 of a grain of morphia hypodermically or an ounce of whiskey as a cardiac stimulant as it is believed that the special dangers of aspiration are cardiac failure, syncope and embolism. When carefully performed these accidents rarely occur. This patient takes for his cough a dessertspoonful of the Mistura Glycyrrhiza Compound every four hours and the syrup of the iodide of iron which is the best remedy in these cases.

Here then, we have a purulent pleurisy secondary to the primary pneumonia, a meta-pneumonic empyema. Empyema is always a secondary disease, and in the great majority of cases is due to tubercular infection, but the cases which occur secondary to the infectious dis-

eases are of rapid development with a corresponding prostration of the patient. In this case the accumulation of fluid was quite rapid and in a few days the physical signs showed the level of the fluid to be at the third interspace. The important question to decide in cases of empyema is what is the best method of treatment. Shall we depend upon aspiration or shall we institute some other form of treatment?

It is true that some cases of empyema occurring secondary to pneumonia and other infectious diseases will recover by repeated aspirations, and some authorities contend that it is not necessary to make free drainage, especially in children, but to aspirate as often as the cavity refills. I do not believe this to be the best course to pursue. The risk of exhaustion from sepsis together with the subsequent contraction of the lung from repeated accumulations of fluid is too great to justify such a course of treatment. In this case if the fluid reaccumulates rapidly, which I believe will occur, we shall resort to free drainage. There are two forms of drainage and you can select what method seems best adapted to the individual case. You can drain the cavity by the introduction of a double drainage tube, or by making a double opening in the chest wall by the resection of one, two or three ribs. The tendency of the day and I think it is good surgery in chronic cases, particularly in tubercular empyema, is to make very free drainage by resecting one or more ribs, but in simple empyema as follows the infectious diseases I do not believe resection is always necessary. It is now accepted that all purulent pleurisies are due to the presence of microbes. Four distinct varieties of purulent pleurisy are now recognized. 1. Those due to the pneumococci. 2. Those due to the steptococcus pyogenes. 3. Those due to saprogenic organisms, i. e., putrid pleurisy. 4. Those due to the bacillus tuberculosis. If we know the nature of the micro-organism causing the pleurisy, it aids us in making a prognosis and determining the best method of treatment. It requires a bacteriological examination to make a positive diagnosis of the kind of pleurisy, I will therefore ask the pathologist of the hospital to examine the aspirated fluid and his report will influence us in the future course of treatment. In the case before us I believe we have a pneumonic empyema.

SPLENIC MYELOGENIC LEUCAEMIA.

The next patient which I bring before you today is suffering from a rather interesting disease and one which is comparatively rare, yet at the same time, it is a disease which you should be able to recognize.

This man is fifty-one years of age and married. A farmer by occupation and a resident of Limestone county, Ala. His father died at the age of sixty-three with pneumonia and his mother with the same

disease at the age of seventy-two. He has one brother and one sister living and in good health. Four are dead, two dying in infancy, one with meningitis and one with bronchitis. The patient has four living children, all in good health, and three are dead. He gives no history of spyhilis or other venereal disease. He had an attack of malarial fever during childhood and has had two attacks of pneumonia. With these exceptions he has always enjoyed very good health until his present illness, which began about eighteen months ago, when he noticed that he was losing flesh and strength and his feet and ankles began to swell. This occurred in spite of the fact that his appetite was good. He also complained of pain in the left hypochondriac and left lumbar region. This would subside for a time, but returned at varying intervals. Today he has had a paroxysm of pain which was severe enough to require the administration of morphia hypodermically. His digestion has been very much impaired during the past year. There is always a tendency to looseness of the bowels and he has usually several movements a day. He has been gradually loosing ground for many months in spite of nourishing food and tonic treatment. About a year ago he noticed that the left side of his abdomen was steadily increasing in size and he could feel a distinct swelling below the ribs on the left side.

As you look at the patient's face you will observe at once that the skin presents a grayish waxy pallor and that he is very much emaciated. His appearance indicates that he is suffering with some serious disease which has produced a very pronounced anaemia. His temperature is normal, while his pulse is rapid and feeble, running usually over one hundred. There is no disease of his lungs. Examination of the heart is negative except a tendency to palpitation and acceleration beyond the normal rate. We find a few dark purpuric spots on different parts of the body. There are no enlarged lymphatic glands except the post cervical which can be distinctly made out. Upon inspection of the abdomen you will notice that the left side is somewhat more distended than the right. Upon palpation we can readily outline upon the left side a hard tumor with a rather sharp border passing downward across the abdomen obliquely from left to right from the costal arch to an inch below the umbilicus. The tumor moves up and down with the respirations, and apparently there are no adhesions as the abdominal muscles move freely over it. Percussing over the tumor we find that there is dullness above extending to the inferior angle of the left scupula. We find also that the area of liver dullness is very much intreased extending an inch and a half below the free margin of the ribs.

Now, what can this abdominal tumor be? From its location I would

say it is probably an enlarged spleen.. What might produce enlargement of the spleen? Cancer and any degeneration of the spleen, malaria, leucaemia, typhoid fever or other infectious diseases. In typhoid and other acute infectious diseases the spleen rarely extends below the ribs. The history, and condition of the patient will exclude malaria and examination of the blood does not show the plasmodium malaria. Some one has suggested that it might be cancer of the left kidney. If it were cancer the outline of the tumor would be irregular and would grow from the lumbar region rather than the left hypochondriac region and would be firmly fixed and would not move with respiration. Now it is very evident, gentlemen, that a diagnosis cannot be made in this case without a blood examination and Dr. E. A. Jones the pathologist of the hospital, has made the examination and reports as follows:

"The following is the result of the examination of blood of Mr. Williams at St. Vincent's Hospital:

Red Cells 3,600,000
White Cells 263,000
Hemoglobin 35-40%

Differential count of Leucocytes:

Myelocytes 32%
Polynuclears and Polymorphonuclears 58%
Lymphocytes 5%
Eosinophiles 5%

"The hemoglobin estimate was made by Dr. Lupton."

The patient's urine is high colored and scanty and deposits a heavy pinkish sediment. Dr. Jones reports the presence of albumen together with a moderate number of granular and a few epithelial casts. Also a large amount of blood and pus cells, squamous, round and occasional renal epithelium, a few uric acid crystals and a considerable deposit of urates.

From the report of the blood examination we can with almost absolute certainty make a diagnosis by exclusion. This patient is suffering with a blood disease known as leucaemia, a disease which is characterized by an enormous increase in the white blood corpuscles, accompanied by hyperplastic changes in the spleen, lymphatic glands or bone marrow. You will remember that the mean number in normal blood is about 8,000 white corpuscles to the cubic millimeter, which with the red disks at 4,500,000, makes the proportion 1 to 580. In cases of leucaemia and leucocytosis the proportion may be so changed that there will be one white to fifty red, or one to ten or even lower, the leucocytes being in some cases equal and in rare cases ex-

ceed the red disks. It must be remembered that there is a physiological leucocytosis which after a full meal may reach 1 to 150, and there are pathological leucocytoses which may equal those of many true leucaemias. The mere fact of the leucocytosis is therefore not proof positive that the case is one of true leucaemia. In leucocytosis the increased number of white corpuscles is transitory and often the result of inflammatory conditions. This patient gives no history of inflammatory disease which would exclude leucocytosis and favor leucaemia. The microscope shows certain alterations in the blood corpuscles which enables us to make a positive diagnosis. In leucaemia we find not only an increase in the white corpuscles, but a different kind of white corpuscle. Dr. Jones has found in this man's blood the myelocyte which is nothing more than a pathological white blood corpuscle. It belongs to the mononuclear variety and is larger than any corpuscle found in leucocytosis. The increase in the white corpuscles is mainly due to the presence of these pathological white blood corpuscles. The eosinophiles are also increased, but not their percentage and they are of no special significance because they are so frequently found in other conditions. The differential count of the leucocytes in the patient's blood shows myelocytes 32 per cent., polynuclears and polymorphonuclears 58 per cent., lymphocytes 5 per cent., and eosinophiles 5 per cent. Many attempts have been made by the aid of the microscope to separate the different varieties of leucaemia, but with only partial success. The majority of leucaemias are mixed. The best authorities tell us that pure splenic and pure myelogenous forms have never been observed while the pure lymphatic form does occur. The most common form is the spleno-medullary or splenomyelogenous leucaemia and that is what we have in this patient. If this were a case of pure lymphatic leucaemia we would find enlarged lymphatic glands with a great increase in the small lymphocytes while the myelocytes would be absent. We find no marked enlargement of the lymphatic glands, but we find the spleen enormously increased in size.

Let us for a moment review the symptoms in this case. We find here a disease coming on insidiously, great anaemia with all of its accompanying symptoms of weakness, palpitation, dyspnoea upon exertion, swollen extremities, a uniform enlargement of the spleen with an enormous increase in the number of leucocytes together with the presence of myelocytes in the blood. This man fortunately has never had hemorrhages which often occur in this disease.

With reference to the treatment, unfortunately we cannot offer much encouragement in cases which are so far advanced as this one. We rely mainly upon Iron, Quinine and Arsenic, together with nutritious

food. Bone marrow has been extensively used, but the results have not been satisfactory. Arsenic is perhaps the best remedy we possess, but to accomplish anything in leucaemia it should be given in large doses. You should begin with three, four or five minims of Fowler's solution three times a day after meals. After a time the dose should be increased by half drops until toxic symptoms appear when the further increase should be stopped and yet the same dose be continued. By carefully watching the effects, the dose can be so regulated as to establish a tolerance for the drug to such an extent that even as much as thirty drops of Fowler's Solution may be taken. Enormous doses of arsenic can be used hypodermically and it is much less toxic than when it is administered by the mouth. It also acts more efficiently when given in this way than when administered by the mouth. The preparation to use hypodermically is Arsenite of Sodium as it never produces any irritation, while Fowler's Solution is very objectionable, invariably causing irritation and sometimes an abscess. In connection with the Arsenic and Iron, you may try the administration of Oxygen by inhalations. Ergot is one of the remedies recommended as useful, as it acts upon the spleen and is believed by some to retard the multiplication of white blood corpuscles. While the prognosis in leucaemia is unfavorable and we cannot promise a cure, we can do much to prolong the life of the patient. Some of these patients live for a number of years. The very best which can be done by treatment is to postpone the fatal end.

MOVABLE KIDNEY.*

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Under this title I purpose to discuss preternatural mobility of the kidney. The various anatomical classifications of this condition attempt to divide it according to the extent of the excursion of the organ.

Some writers speak of "floating kidney" only when the viscus possesses a mesonephron, and those cases not having this anatomical phenomena they call "movable kidney." As the meso-nephron is of variable length it would be somewhat difficult to say in which of these classes certain cases properly belong. Not infrequently the patients who have the most annoying symptoms have only a moderate amount of motion in the offending kidney. Indeed, a most thorough examination is necessary to detect that there is any mobility present. There is a certain

*Read before the Jefferson County Medical Society.

amount of motion normal to both kidneys; more marked in the right. This Holledererer calls "respiratory mobility," and any exaggeration of it he terms "wandering kidney."

How or why a kidney becomes dislodged from its normal position, has been the subject of considerable investigation. The etiology as given in the text books of the day will cover the cause in a considerable number of cases, but there are surely many cases which are not satisfactorily explained. It is a well-known fact that movable kidney is as rare in men as it is common in women. Thus, Suckling, in 100 women and 100 men, found 42 women, but only 6 men with movable kidney. Kuttner has collected from various sources 667 cases, of these 584 were women and 83 men.

Pregnancy, traumatism, constricting bands about the chest or waist, decrease in the intra-abdominal pressure, wasting diseases, gastroptosis and enteroptosis are each accredited in the literature with displacing the kidney. There can be no doubt, judging from the reports of cases, that each of the above has been a factor in producing this condition. Cleveland has reported seven cases, four of which he attributes to heavy lifting, and in three he believes a fall was the determining factor.

Gastroptosis and enteroptosis are occasionally associated with a floating kidney, but not so commonly as some observers declare. Langerhaus goes so far as to say that movable kidney is always present in gastroptosis. The same writer found, in 100 cases of movable kidney, 47 that had enteroptosis. There is a possible anatomical explanation for the coexistence of movable kidney and enteroptosis. The descending part of the duodenum and the upper portion of the ascending colon are connected by loose arcalar tissue to the right kidney. The left kidney is similarly connected at its lower extremity to the descending colon.

Lacing, or wearing constricting bands about the waist or chest, is generally considered to aid in producing mobility of the kidney. When this practice is persisted in, it brings about a constriction of the liver, forcing that organ downward. The right kidney lies close under the liver in a shallow depression made for it in that viscus, so that it stands to reason that any force which displaces the liver or a portion thereof downward, will likewise force the kidney out of its place, more or less. What is true of the liver on the right holds good, only to a less degree, of the spleen on the left side. Becker and Lendhoff, in an effort to determine just how much the popular fashion of tight-lacing contributes to the causation of this condition, have studied twenty-four young, native Samoan women, who had never worn corsets. In six of these there was a movable right kidney. It has been said that in some indi-

viduals a movable kidney is congenital; and those who have advanced this explanation are not without cases to substantiate their claims. Kellar says that while he has seen movable kidney in children, it is certainly very rare. Holllederer examined forty children from one to six years of age without finding a single case of movable kidney. He then examined ten girls between the thirteenth and fourteenth years. Of these, five had movable kidney. Five boys of the same age were next examined and in none of them could the kidney be palpated.

Pregnancy is a predisposing cause in comparatively few cases. A decrease in the intra-abdominal pressure, following the extirpation of large abdominal or pelvic growths, may be a contributing cause. A deficiency of adipose tissue, particularly in the perirenal region, Edebohls believes to be the true underlying cause.

The symptoms may be conveniently divided into the local and reflex Of the local symptoms, pain is the most common and the one oftenest complained of by the patient. It is very variable, both in character and location. Perhaps the sensation of a weight associated with a periodical, aching pain in the lower right quadrant is the type most frequently seen. The pain may be sharp, dull, aching, lancinating, etc.; it may be constant or paroxysmal. "Severe abdominal pain with chills, nausea, vomiting, fever and collapse"—so called Dietl's crisis—may rarely occur (Osler). Tenderness is occasionally a troublesome symptom.

The vast majority of cases suffer more from the reflex symptoms, which are those of the neurasthenic. There is gastritis of the nervous type, palpitation and distention of the abdomen with gas. There may be no symptoms at all.

The diagnosis in the majority of cases is perfectly simple. There are, on the other hand, times when a mere tyro cannot detect the true condition. It is to this class that the following remarks more especially apply. Noble declares that, for seven years, he searched in vain for movable kidney. His failure to find them he attributes to examining the patients lying flat on their back. He recommends that the examination be made in the erect position. The patient is told to lean forward ,supporting a part of the weight of the body by resting the hands on a table. This is, no doubt, excellent advice and well worth remembering. Still, an examination in a reclining position has its advantages. If the right kidney is to be palpated the patient should be placed on the left side with the legs flexed on the thighs and the thighs flexed on the abdomen. In this position the abdominal walls are thoroughly relaxed and offer the least possible resistance to manipulation. If the patient is now asked to take several deep inspirations in rapid succession the examination will be further facilitated, as the kidney

is thus encouraged to leave its normal position. The right kidney is by far the one most commonly found out of its place. Osler cites 727 cases analyzed by Kuttner. Of these 553 cases occurred on the right and 81 onthe left side, and in 93 both kidneys were movable.

Some of the conditions to be differentiated from movable kidney are—enlargement of the gall, bladder, appendicitis, ovarian tumors with long pedicles, an abscess in an elongated lobule of the liver, an echincoccus cyst, growths of the pylorus, head of the pancreas and ascending or descending colon, neoplasm of the messentery, and nephritic colic.

Enlargements of the gall bladder, accompanied by jaundice, fever, sweat, chills, etc., are not confusel with movable kidney. But when there is little or no jaundice and an absence of the constitutional symptoms common to obstruction of the common duct, the case may not be so clear. On palpation the gall bladder does not disappear as completely or as easily as a kidney. It does not give the same sensation to the palpating hand, and the characteristic outline of the kidney is a further point of distinction. Grasping the kidney is likely to produce a sickening feeling in the patient. In hydrops of the gall bladder fluctuation can sometimes be detected. A history of frequent urination or anuria for a number of hours, followed by polyuria, would suggest the kidney. Tyson mentions a case in which the tumor gradually increased in size and then after copious urination almost entirely disappeared.

Appendicitis may be confounded with movable kidney and vice versa. Edebohls asserts that 80 per cent. to 90 per cent. of individuals have appendicitis. Very few writers will agree with this statement, unless the "respiratory mobility" be considered abnormal. The two conditions are, however, not rarely found to co-exist, as is abundantly proven by reported cases. In appendicitis, the onset is more acute, and the constitutional symptoms, fever, rapid pulse, etc., will serve to point to the correct diagnosis. The abdominal pain and tenderness are more pronounced, and rigidity is more localized in appendicitis. Then, too, there is usually a history of some indiscretion in diet. Palpation would probably reveal a reniform tumor if a movable kidney were present. In appendicitis there would usually be a leukosytosis. But the most experienced diagnostician will occasonally fail to correctly interpret the symptoms.

An ovarian tumor with a long pedicle may be mistaken for a movable kidney. A careful pelvic and bimanual examination should ordinarily settle the question. An ovarian tumor (or pedunculated fibroid) would move in the direction of the attachment. A movable kidney would disappear under the costal arch. The history of an increase in

size in the first and the absence of such history in the second would be a further point of difference.

An abscess in an elongated lobule of the liver, if large enough to simulate a movable kidney, would fluctuate and produce marked constitutional symptoms. Tenderness in the one would be exquisite and in a fixed point, while in the other the local symptoms would not be nearly so pronounced.

Echinococcus cysts increase in size and do not give pain; they fluctuate, and sometimes hydratic fremitus can be elicited. This would seem sufficient to separate the cyst from movable kidney.

The diagnosis between a growth of the pylorus and a movable kidney may present some confusing symptoms. Becker reports a case diagnosed as a pyloric growth, which, on opening the abdomen to relieve the symptoms of obstruction, was discovered to be a displaced kidney pressing on the duodenum. The symptoms simulated a pyloric neoplasm. A malignant growth of the pylorus gives well-known gastric symptoms, cachexia, a loss of weight and strength, and is commonly seen in individuals past middle life. The chemical examination of the stomach contents and the blood count will give additional evidence of the nature of the disease. Growths of the pylorus are very hard and have an irregular outline. The kidney has a more elastic feel and its shape is characteristic. Pancreatic growths are immovable and exceedingly hard.

Malignant disease of the ascending or the descending colon may produce tumors resembling in some respects a movable kidney. They give, however, a history of increasing in size, and there is cachexia with loss of weight and strength. There is also a leukocytosis.

On the left side, a movable spleen might be mistaken for a movable kidney. The absence of splenic dullness and the shape of the organ will usually suffice to distinguish the two organs. It should be remembered, too, that the spleen is rarely found out of its place

Neoplasms of the messentery are rarely to be diagnosed from movable kidney. Here the rapid growth, physical characteristics and constitutional symptoms point to the correct diagnosis.

The symptoms produced by a renal calculus may so closely resemble those of movable kidney as to be exceedingly difficult to differentiate. The physical signs and symtomology are not of much avail in doubtful cases. The urine should be carefully studied. Harris' segregator may be used to collect the urine from each kidney separately. Soon after an attack of pain in the kidney, if the symptom be due to a stone, there is nearly always present in the urine blood, and there may be pus. Certain crystals may be constantly found, viz: oxalate of lime. Albumen may be present from a slight trace to a considerable quantity.

The presence of renal epitheleum in the urine would be further evidence of some disturbance in this organ. A comparative examination, therefore, of the urine taken from each ureter, separately, would most likely indicate whichof the kidneys, if either, contained the calculus. When available, the X-ray is the surest means at our disposal to settle the question of the presence of a renal calculus. In the hands of a competent skiagrapher the Roentgen ray is said by Leonard to be "mathematically accurate." The treatment is either palliative or operative. Rest in bed, tonics, and good food, followed by the use of a properly adjusted supporter will, in a certain percentage of cases, give relief. Clark believes the rest in bed tends to aid in the deposition of perirenal fat. He suggests that the supporter be put on in a reclining position. The neurasthenic case is rarely benefited by this treatment. Even the supporter is annoying to them, and not infrequently they declare the cure is worse than the disease.

Twenty years ago Hahn, of Berlin, devised the operation of nephrorrhaphy. Following Hahn, Landau, Tuffier, Clark, Guyon and others have practiced this operation, modifying it to meet individual ideas. Previous to this time nephrectomy was the operative treatment for movable kidney when the symptoms became intolerable. Hahn sutured the fatty capsule, Tuffier, Guyon, Edehohls and others split the fibrous capsule and evert it so that the cortex of the kidney is brought in contact with the fascia lumborum. Soon after this the suture of the parenchyma was added to the splitting of the capsule.

Andrews has recently devised an operation which he calls the "reefing operation for movable kidney." It consists in drawing the fatty capsule out through the operative wound, and while an assistant holds it thus, the incision is closed with mattress sutures in such manner as to transfix the fatty capsule in the line of the incision. The portion of the fatty capsule left protruding is trimmed off so as to leave only an inch or so outside the wound. These flaps are now sewed to either side of the wound.

Most of the well-known text books describe and recommend the suture method of fixation—that is, passing the suture through the parenchyma of the kidney and the muscular structures of the incision. Silk, silk-worm gut, catgut, and silver wire have all been used at various times in this operation.

An operation that is rapidly coming into popular favor with the profession is nephropexy, as suggested by Jabouly. This method dispenses with the use of sutures and relies upon the formation of granulation tissue to anchor the kidney. Senn has practiced a similar operation for a number of years with excellent results. Several years ago Deaver adopted the technique as devised by Senn, which he has since

constantly used, making a change or an addition now and then, as suggested by his experience.

The technique of the operation practiced by Deaver is as follows: The patient is placed on the left side with an air cushion under the left flank. The kidney is pushed into its proper position in the loin space and held there by an assistant. A vertical incision is made in the lumbar region of the affected side down to the perirenal adipose tissue. The fatty capsule is now grasped with the forceps, and, aided by the fingers of the operator, and the pressure maintained anteriorly by the assistant, the kidney is forced outside of the wound. The fatty capsule is then stripped off and cut away completely and the fibrous capsule is scarificed over the posterior surface of the organ with a scalpel. The scarifications are carefully done, so as not to encroach on the cortex of the organ. A piece of iodoform gauze is now passed beneath each pole of the viscus, so that the organ can be lifted at will. More gauze is packed around the kidney—between it and the first pieces of gauze described. In placing the gauze it is well to keep in mind that the renal vessels or ureter might be compressed. So far, then, we have the kidney supported by a piece of gauze beneath each pole and entirely surrounded by gauze. A piece of iodoform gauze is next laid over the viscus which forms the floor of the wound. The two pieces acting as suspensories are then tied over the gauze packing and the kidney—so that they envelope the gauze and kidney. The wound is dressed with a pad over the kidney anteriorly, and unless the dressing become soiled, the wound is not disturbed for a week or ten days. At the end of that time the gauze is removed and the wound repacked. Wounds of this character heal up in three to four weeks. The gaping of the wound is prevented by the use of adhesive plaster. I have had the opportunity of palpating, through an abdominal wound, a kidney previously fixed by this method. It was firmly anchored.

The fixation of the kidney by passing sutures through the parenchyma is neither a safe nor a successful operation, as is instanced by authentic reports. Abscesses not infrequently occur, and the organ often returns to its old position. Barrow operated on a patient to anchor a kidney which had previously been fixed by the suture method. He found the upper pole free and the lower pole swimming on scar tissue. Deaver, Senn, Noble and Clark mention cases of stitch abscesses following the use of sutures in the kidneys. Clark has seen a kidney partially destroyed by a stitch abscess. Mr. Christopher Heath has abandoned the use of sutures in this operation for the same reason.

Andrews quotes the following statistics, compiled by Delvoie Keen

and Langenbuch, which he classifies according to the technique of the operation:

	Cured.	Imp.	Failure Relapsed.	Deaths.
Suture of Fatty Capsule	4	3	7	0
Suture of Fibrous Capsule	10	3	9	2
Suture of Parenchyma	75	14	19	2
Suture of Parenchyma (Capsule stripped)	9	0	1	0
Special Methods	37	10	9	1
	135	30	45	5

Deaver has reported eleven cases, all successful, treated by the gauze method.

From the foregoing review of the literature it is plain that the etiology of movable kidney is not yet fully understood. The operation promising the best results, and the least risk to the patient, is the anchoring of the kidney by the gauze packing operation.

LITERATURE.

Deaver—Annals of Surgery, June, 1899.
Deaver—Treatise on Appendicitis.
Clark—Progressive Medicine, June, 1900.
Noble—Journal of American Medical Association, Vol. xxxv., No. 24.
Andrews—Medical Association, Vol. xxxv., No. 14.
Lewis—N. Y. Medical Journal, Vol. lxvii.
Cleveland—N. Y. Medical Record, Vol. liii.
Edebohls—Cited by Noble.
Suckling—Edinburgh Medical Journal.
American Text-Book of Surgery.
International Text-Book of Surgery.
Jacabson's Operative Surgery.
Wharton and Curtis' Surgery.
Osler's Practice of Medicine.
Tyson's Practice of Medicine.
Musser's Medical Diagnosis.
Gray's Anatomy.

Selected Articles.

ANÆSTHESIA AND ANÆSTHETICS.*

By W. R. Sifford, M. D.,

OF NASHVILLE, TENN.

By the former of the two terms we understand the meaning to be a privation of feeling or sensation, lack of sensibility, etc. This condition when met with in the human body is due either to some pathologic condition, or to the effects of some mechanical or medicinal agent applied for a definite or specific purpose. When due to the former cause, we most generally find the condition to be a symtomatic one. This meaning, or rather application, of the term, we deem far too broad and far reaching to attempt to discuss at this time. We therefore invite your attention to that form of anæsthesia produced by mechanical or medical agents for a definite or specific purpose.

For the production of anæsthesia in a whole or part of the body, for the better or more skillful performance of minor or major surgical operations, for making more thorough examinations of obscure lesions, or for the relief temporarily of excruciating pain, certain agents are required to which the name of Anæsthetics has been given. The term, anæsthetics, is no new one to the medical profession. To be sure, it is only within the just closed century that the problem has been practically solved. And even then it remained for the closing years of that century to witness the discovery of, not a new anæsthetic, but the application of one already widely used, in a hitherto unknown, and unheard of manner; and, by the ingenuous method of application, furnishing the medical profession wth a most potent method of producing anæsthesia. We trust you will pardon us for calling your attention briefly to the history of anæsthetics.

The prevention of pain in surgical operations has been an object of anxious solicitude with practitioners from time immemorial; and we find that suggestons more or less plausible have been made at different periods with a view of meeting this important end. Strange to say, the most remarkable of all these suggestions, and consequently the nearest attempt at a solution of the problem prior to the real discovery of anæsthetics about the middle of the nineteenth century, we find in the writings of Theodoric in the latter part of the thirteenth century. His method consisted in impregnating a sponge with a strong aqueous extract of various anodyne articles, such as opium, hem-

*Read at Nashville Academy of Medicine, January 15, 1901.

lock, lettuce, hyoscyamus and mandragora, and holding this sponge, denominated the "spongia somnifera," to the nose of the patient till he fell asleep, when the operation was proceeded with.

From the time of Theodoric to the middle of the last century many methods of producing anæsthesia were tried at various times, and one by one discarded as impracticable. Among the various methods used may be mentioned the use of nitrous oxide gas alone, and combined with other vapors, copious venesection, nerve compression, the administration of the various preparations of opium and many other methods too numerous to mention. Notwithstanding all of these various attempts to prevent pain in surgical operations, no anæsthetic agent, using the term in its legitimate sense, was discovered until 1844, when Dr. Horace Wells, of Hartford, Conn., discovered the anæsthetic properties of nitrous oxide gas. This was followed by the rapid discovery in 1846 of the efficacy of sulphuric ether by Dr. W. T. G. Morton, and one year later, 1847, by the discovery of chloroform as an anæsthetic agent by Sir J. Y. Simpson, of Edinburgh.

No little controversy has at various times arisen as to the true discoverer of the above named anæsthetics; and even now there is a feeling of doubt in the minds of many in regard to whom the honor is due. To my mind the matter is clear. This, however, should be a matter of small moment to the medical profession; we have them, and let us make the most of them. In the past century surgery has unquestionably made greater progress than any branch of medicine, and that progress is due largely to two things: the discovery of anæsthetics and the knowledge of antisepsis.

Anæsthetics may be divided for study in to general and local—general anæsthetics being often spoken of as cerebral or pulmonary anæsthetics. Various agents for the production of general anaesthesia have been discovered and used with variable degrees of success; such as chloroform, sulphuric ether, bromide of ethyl, nitrous oxide gas, chloral by intravenous injection, and many others too numerous to mention. But, at the present time, the medical profession use largely chloroform and ether; while the dental branch of the profession, in addition to these two agents, use nitrous oxide gas—this agent not being of much value to the surgeon on account of the very transient effects produced.

All anæsthetics are dangerous, and should not be administered indiscriminately. Medical students especially should have this fact thoroughly impressed on their minds by their teachers; in the absence of which, they are prone to go out into the field of practice imbued with the idea—that having seen their clinical teachers make use of these agents seemingly without regard to the dangers attending their use—

that they themselves may attach due importance to the good and bad results that may follow their use. Any anæsthetic administered to a patient which fails to result in good to such patient, is liable to be productive of harm.

The mortality rate attending the use of ether, chloroform and nitrous oxide gas is very low, and should be even lower than what it now is —that attending the use of chloroform being about 1-10,000, ether 1-26,000, nitrous oxide gas 1-150,000, or an average mortality from all of 1-60,000. Many of these fatalities have resulted from improper posturing of the patient, or inadequate means being at hand to meet emergencies, and from the agents being in the hands of an incompetent person or one unfamiliar with their use. The position of an anæsthetist in an operation is a very important one, second in importance only to that of the operator; and every surgeon, in placing his assistants in an operation, should invariably select the best available man for the position. To operators doing institutional work this caution is not necessary, as trained anæsthetists are to be found in all well regulated institutions. But it should be borne in mind by all who attempt to operate under less favorable conditions.

Anæsthetics act by producing a paralysis of the cerebral and spinal nerve centers. There is first a stage of cerebral excitement, followed by a stage of cerebral insensibility. Then a loss of voluntary movement, followed by a loss of reflex action. Consciousness is lost before paralysis of the muscles supervenes, and a patient is said to be fully anæsthetized when the nerve centers are paralyzed with the exception of those presiding over respiration and circulation.

Death from the administration of chloroform as an anæsthetic may come from a failure of either foot of the vital tripod, the head, the lungs or the heart. In other words, it may be due to coma, asphyxia, or to syncope. It may also result from gastric irritability. Of the former causes it is extremely difficult to distinguish which of the conditions may have been the primary one, for whichever organ fails first, the others cease to act in a very short time. Ether as an anæsthetic results fatally usually by producing asphyxia, but also may produce death by its action on the kidneys (suppression of urine), or by producing a low form of suffocative catarrh, or a pneumonia. The symptoms of asphyxia come on gradually, and thus a warning is given; and by the rapid administration of the drug, and consequently a shorter period of chilling for the bronchial mucous membrane, a fatality from the latter cause may be averted.

Fortunately, the surgeon of the present day encounters few patients who present themselves for operative procedures who cannot take an anæsthetic. Patients whose vital forces are at a low ebb should not

be the subject of anæsthesia. Among the contra-indications to the use of ether as an anæsthetic agent may be mentioned severe bronchitis, emphysema, asthma, extensive renal disease, marked atheroma, protracted operations about the mouth, jaws, or pharynx, which necessitates the mouth and nose being uncovered; operations calling for the applications of the actual cautery about the region of the mouth, unless given with great care; cataract operations; operation for the removal of bones of the middle ear, and operations for inflammatory conditions in the abdominal cavity. Among the contra-indications to the use of chloroform may be mentioned; irregularity of heart action, valvular disease, or fatty degeneration of heart, and emergency cases in which proper posturing and preliminary preparation of patient cannot be carried out. We are inclined to the opinion, that taking a given number of patients who present themselves for operation, that we will find contra-indications to the use of ether in a greater number than we will contra-indications to the use of chloroform.

Most writers on the subject of anæsthesia draw the following conclusions: "As a rule, ether, as the safest and most powerful anæsthetic, is to be preferred. The lessened risk to life more than counterbalances its minor disadvantages." With this conclusion, with its broad and sweeping assertions, I must differ; believing, as I do, and basing my belief on a somewhat limited observation, that ether is not a safer agent than chloroform, and that the mortality attending its use is as great, if not greater, than that attending the use of chloroform. Too many surgeons, I regret to state, do not select an anæsthetic, but instead give one anæsthetic in a routine sort of way, with perhaps two exceptions. Those who use ether as a routine practice will, some times, deviate from their narrow road in obstetrical work and operations upon children. Every patient before operation, should be carefully examined by the surgeon, or the anæsthetist, or both, and the anæsthetic agent selected which is best suited to the patient.

The first thing to be considered is: Can the patient take an anæsthetic? If so, then the character of operation, age, condition of lungs, heart, and, lastly, the examination of the urine. This being done, the surgeon should be in a position to inelligently select an anæsthetic for each and every patient. Operators are too prone to say when asked by the anæsthetist what agent they shall use: "Oh, give him ether; it is safer." Or, "give him chloroform; it acts quicker and is easier to administer," an expression only too frequently heard. Such practice is very much to be deprecated, and every surgeon should give as much attention to the selection of the anæsthetic agent in each case as he does to the selection of the particular operation he expects to perform.

For the administration of chloroform as an anæsthetic, five rules have been laid down; and all writers agree to a unit, that for the successful and safe administration of this agent, they should be fully carried out. These five rules are: recumbent position, head on level with body; free play of diaphragm, by having clothing loose; stomach empty and no gastric tympany; empty stomach, that emesis may not interfere with respiration; gradual administration, that vapor may not be in a too condensed form, and thus paralyze heart muscle; and plenty of atmospheric air for the same reason as given in rule 4. For the administration of ether these rules will suffice, with perhaps two exceptions. That of position and administration. It is not absolutely necessary for the patient to assume the recumbent position during the administration of ether; but, on the other hand, the patient may be anæsthetized in the sitting posture, or even in the erect position if supported by assistants, as is deemed necessary for certain operative procedures, such as the subcutaneous operation for the relief of varicocele. Rule 4 is also subject to change in the use of ether, as it generally becomes necessary to push the anæsthetic when the patient has passed from the first to the second stage of anæsthesia, in order to reach the third or last stage without unnecessarily prolonging the second stage.

After an operation has been decided upon, and the anæsthetic agent selected, the patient should be prepared for the anæsthetic just as thoroughly as he is prepared for the operation. Stimulative treatment should be given for variable periods before the anæsthetic, either by the mouth or hypodermically if required. Preferably the latter way, if medication is begun only a short time in advance of the anæsthetic. When possible, the anæsthetist should examine and converse with the patient prior to the assumption of his duties, that he may, by words of encouragement and assurance, remove so far as possible all doubt and fear as to the result of the anæsthesia from the mind of the patient, thus securing a perfectly tranquil condition, which is in itself the one thing necessary to a rapid, safe and satisfactory anæsthesia. After posturing the patient, the anæsthetist should examine the mouth and remove all foreign bodies, such as false teeth, quids of tobacco, pins, chewing gum, etc., as all such articles are liable to become dislocated during the progress of anæsthesia, and dropping backward pass into the esophagus or trachea and cause serious trouble.

Chloroform is a clear liquid, formula ($C\ H\ C_3$), spec. grav. about 1.500, with an ethereal odor and sweetish but not unpleasant taste, deteriorating rapidly on exposure to light, and should always be kept in a dark place or in a colored receptacle. After anointing patient's face with vaseline or some ungent, to prevent vesication, and instruct-

ing the patient to close the eyes, to prevent a possible conjunctivitis from contact with the vapor, you are ready to begin the administration of the chloroform. Many methods of administration and appliances for administering have been suggested from the douching of a handkerchief or napkin with one half to one drachm of the drug, and holding close to, but not touching the nose of the patient, to the drop by drop method applied to a towel laid over the open mouah; but of all the methods and appliances by far the best, in my opinion, is the Esmarch inhaler or mask, which consists of a metalic ladle shaped frame, covered by gauze, which covers both nose and mouth of patient, and allows plenty of air to pass through the meshes of the gauze, at the same time resting lightly on face and allowing the anæsthetist one free hand, while with the other he holds the receptacle containing the drug, which should be a graduated clear bottle with a regulated drop attachment.

Patient should be instructed to take full and free inspirations. In chloroform anæsthesia we have practically three stages—the first stage being the stage of exhilaration or excitement, beginning with the exhibition and extending to the beginning of second stage, which is evidenced by loss of consciousness, lack of sensibility, and muscular relaxation. This is the stage in which operations should be performed. Passing from this stage we reach the third stage, or stage of dangerous narcosis, in which there is weakened pulse, stertorous respiration and other indications of profound involvement of nerve centers. Pupils are generally contracted in chloroform anæsthesia, but will rapidly dilate when patient passes to the third stage, when a few additional whiffs may snap the slender thread and add one more to increase the mortality from chloroform anæsthesia.

Ether, chemically the oxide of ethyl, is a highly volatile clear liquid, pungent in odor, sharp in taste, with a specific gravity of .723, and is highly inflammable and explosive. Ether vapor is heavier than air, and for this reason should never be exhibited on a level with or above an open light or fire. In the event of an explosion the patient's face should at once be covered by a towel or pillow and the cone or mask thrown on the floor, but never the can or bottle containing the ether. For the administration, various appliances have been suggested with various degrees of success. After a thorough trial of those most generally in use, I have reached the conclusion that for a safe, and in every way satisfactory ether anæsthesia, the Allis cone, or inhaler, is the one to be preferred. On account of the irritation usually produced by the vapor on the bronchial mucous membrane by the first inhalations, the anæsthetist should begin by pouring a small quantity of ether on the inhaler, and first holding it some distance from face of patient; and, as he becomes accustomed to the effects, the inhaler should be grad-

ually lowered till it rests on the face, fitting snugly so as to exclude all air, except that which may, or may not, be allowed to pass through the top of the inhaler. The anæsthetist should regulate this according to the needs of the patient and the stage of the anæsthesia. In ether anæsthesia we have three stages, differing somewhat from the three stages of chloroform anæsthesia, in that during the third stage, and not the second, as in the latter, we have the operative stage, while the second stage of ether anæsthesia corresponds to the first stage in chloroform, where we may expect more or less excitement, muscular action and rigidity. The first stage of ether, being one which might be called the suggestive stage; the patient, unless unduly frightened, being in a quiet, passive condition, during which time the anæsthetist may cause the patient to perform various acts at his suggestion. After the first few inhalations of ether the anæsthetic should be pushed as rapidly as conducive with safety to completion, or the third stage, so that the prolonged exposure of the bronchial mucous membrane to the frigid effects of the ether may not produce one of the bad effects or sequelæ to ether anæsthesia already mentioned.

For the safe and successful production of anæsthesia, and in order that he may be prepared to meet any emergency that may arise, the anæsthetist should, before exhibiting the anæsthetic agent, provide himself with all such things, some of which he may, at some time during the course of the anæsthetic, find himself in need. He should provide himself with both ether and chloroform, and proper apparatus for the administration of both. Also a hypodermic syringe, tongue forceps and a pair of long dressing forceps with sponges with which to clear the mouth of mucous. Simulants, such as strychnia, atropia, digitalis, nitro gylcerine, whiskey and nitrate of amyl, should be in readiness. In all well regulated hospitals or private surgical institutions should be found a farradic battery and apparatus for the proper production of forced artificial respiration.

By this term, mixed anæsthesia, we mean the anæsthesia produced by the combined effect of morphia and atropia hypodermatically administered fifteen minutes before beginning the anæsthetic, and not, as is generally understood, by the administration of alcohol, chloroform and ether in the usual proportions of alcohol 1 pt., chloroform 2 pts., and ether 3 pts. I mention this combination only to condemn it; believing, as I do, that no good can result, and much harm may and does result from the use of such combination. The advantages gained by the use of mixed anæsthesia are first the quieting effects of the morphia upon all highly nervous patients, causing them to pass rapidly and quietly to the stage of surgical anæsthesia with the use of a much smaller amount of the agent. Second, the ease with which

the anæsthetist may maintain the desired stage. Third, the effect of the morphia on the stomach during and after the anæsthesia in preventing emesis. Fourth, the effect of the atropia on the respiration and circulation. Fifth, and lastly, the anodyne effects of the morphia on the patient after operation.

Among the many emergencies that may arise during the progress of anæsthesia may be mentioned: Suspension of respiration, obstructed respiration, tetanic fixation or relaxation of respiratory muscles, stertorous breathing, either palatine or laryngeal in character; syncope, coma and asphyxia. In order that the anæsthetist may successfully meet and combat with these conditions when they arise he must be able, first, to recognize the condition and the cause producing same, and by a thorough knowledge of the proper treatment in each case be able to successfully cope with these emergencies or accidents as they arise.

For the purpose of rendering certain parts of the body insensible to pain for the performance of certain minor surgical operations, various agents have been suggested and used with different degrees of success. These are known as local anæsthetics, and are used by either applying directly to the skin or mucous membrane of the part to be rendered insensible to pain, as in the use of the refrigerant agents, or by the injection method into the skin, cellular tissue or deeper structures of the body. Among the agents in general use at the present time may be mentioned, Hydrochlorate of Cocaine, Eucain B., Rhigolene, Ethyl Chloride, Ice, Ice and Salt Mixture, Sulphuric Ether, Infiltration Method, and the injection of Schleich's Solution, Consisting of Mur. Cocain Gr. 1 1-2.; Mur. Morphia Gr. 1 1-3; Sod. Chloride Gr. 3; aq. Dest. 3 1-2 oz. Rapidly repeated deep inspirations kept up for a few minutes will also produce insensibility to pain, but sensibility to contact is not obliterated. Many of these local anæsthetic agents are of little value to the surgeon except in the performance of very minor operations. Cocaine standing perhaps at the head of the list as a local anæsthetic agent, although Eucain has many admirers, especially among the dental branch of medicine, and is said to be entirely devoid of dangerous properties. Cocaine, on the contrary, is said to have produced fatal results and is generally used with some degree of caution. However, I have never witnessed any bad results from the use of this drug as a local anæsthetic, and I do not believe if it is used with judgment and skill in solutions of proper strength that any such results will follow its use.

To Dr. J. Leonard Corning, of New York, the medical profession is indebted for the discovery of the intraspinal method of inducing anæsthesia. This method has since the first discov-

ery and successful use by Dr. Corning in 1885, been practiced very extensively by other able men, to whom due credit should be given for improvements made in methods of applications, technique, etc. This method of producing anæsthesia which consists in the injection of various local anæsthetic agents not into the spinal cord, but into the canal around the cord, has been a much discussed one during the past year, and while the various writers all aim at the same object, yet, we find that the subject has been written of at various times under such high sounding headings as, Medullary Narcosis, Subdural anæsthesia, Subarachnoid anæsthesia, Rachidian anaesthesia, Intra-spinal Cocainization, Lumbar puncture and Lumbar anæsthesia; but to my mind the term Spinal Anæsthesia is the most appropriate, covering as it does the use of any local anæsthetic agent at any point along the spinal canal, having for its object the production of a sufficient anæsthetic effect for the painless performance of surgical operations below a given point; that point generally speaking the diaphragm, although anæsthesia has often been produced as high as the axillary region, yet we have no record of operations done above the abdomen. The agents used in this method prior to the present time with more or less success are Cocaine Mur., Eucain B., Antipyrin, Ergot and Quinine. The general concensus of opinion, however, is, that of this entire list only two will stand the test—Cocaine and Eucain. The majority of operators using cocaine, while some prefer eucain on account of the ease with which a perfectly sterile solution may be made, it also being lesss toxic than cocaine, while it is practically impossible to sterilize cocaine without the process having some destructive effects upon the drug.

The technic of lumbar puncture is a very simple one. The point of election being usually just below the fourth lumbar vertebra, although it may be made at any point below the termination of the cord. The injection should be made with a long slender and somewhat flexible needle, with a sufficiently large opening to permit the escape of the cerebro spinal fluid which serves as a guide for the successful performance of the operation. The needle having a very short bevel at the point. About 15 to 20 M. of a 2 per cent. solution of cocaine or eucain properly injected into the subarachnoid space will usually produce an anæsthetic effect lasting from one to five hours, and admit of the painless performance of all operations below the costal margin, with perhaps the exception of intra-abdominal lesions of an inflammatory character. At the present stage of spinal anæsthesia it is impossible to predict a future for it. That it has come to stay there seems to be no doubt, and yet we do not believe that it will ever take the place of Ether or Chloroform as a routine anæs-

thetic. It is not without its dangers, having already been productive of fatal results, and we find that its use is almost invariably followed by a train of very distressing symptoms, which sometimes become alarming to the operator, such as acceleration of pulse rate, increased respiration, elevation of temperature, severe headache, involuntary action of the bladdder and bowels, and nausea and vomiting. Some of these distressing symptoms lasting as long as twenty-four to forty-eight hours after operation. The chief danger in this method of anæsthesia, however, is the danger of an imperfect asepsis; hence, it is a method not to be used by everybody, but only by careful, competent and skilled surgeons.

All experienced surgeons recognize the great importance of a careful administration of anæsthetics, and all physicians at some time during their professional career are liable to be called upon to administer them. Notwithstanding this fact, very little attention is paid to the teaching of anæsthesia in any of our medical colleges at the present. Even in England, the home of professional anæsthetists too little attention is paid to the teaching of anæsthesia at present, although they are far in advance of their brethren this side of the waters. Students should be taught the subject of anæsthesia by being required to examine their patients before, during, and after anæsthesia, studying any noteworthy difference from the normal; and also be taught to make the choice of an anæsthetic.

I trust the time is not far distant, when medical faculties will recognize the tremendous responsibility of the anæsthetist, and that all graduates may be called upon to administer them. The facilities for teaching this important subject should be increased and made compulsory. In this way the students of the future will graduate and go out in the vast field of practice, much better equipped in a very important requisite than their predecessors have been.—The Southern Practitioner.

CARBUNCLES.—Creel has relied on Ecthol given internally, in doses of a teaspoonful, in cases of carbuncle, flaxseed poultices applied locally, emptying of pus, scraping out of dead tissue and cleansing with peroxide of hydrogen; after this a topic application of Ecthol on absorbent cotton every four to eight hours. The average duration of this treatment in his cases was ten days.—Jour. Amer. Med. Ass'n.

Editorial.

JNO. C. LeGRAND, M. D.,.....Editor and Prop.

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The Legislature vs. The Children of Alabama.

The defeat in our General Assembly of the proposed legislation looking to the prevention of working children of tender years in mills and factories, is a reflection upon our civilization and a denial of justice to a class, which, more than any other, should be the object of our commonwealth's solicitude.

The objection to such a law, it is quite sure, cannot be predicated upon the idea that long hours of work and confinement can in any sense be beneficial to a boy or girl during the early formative period, when the mind, the body and the morals are being shaped for future strength and usefulness as parent and citizen. Fresh air, varied exercise, and training at home and in the school conduce more strongly to physical and moral development, than the enslavement to a hum-

drum, imprisoning, health-hurting and body-dwarfing existence spent by thousands of children in mills and factories.

Whatever may be the differences subsisting between the statesman and politician, each and every one of them, when pressed by partial friends to seek office, fume and fret and howl and "holler" for an elevated citizenship, and they foam at the mouth as they preach and prate about a higher standard of literacy. They cry aloud, "We must educate! We must educate!" and they consider it a most patriotic duty to increase the general school fund appropriation. This is as it should be, but the representatives of every constituency should demand more than the mere appropriation. They should see to it that the little minds that are only used to the spindle and the loom are given an opportunity to share in the State's beneficent provision for the blessings of at least a common school education.

Most children, availing themselves of the present provision, can, by the age of twelve years, learn to read, write and cipher well, and while these are the mere rudiments of an education, they will be of incalculable value to the child. It seems to us that it is an unnatural parent and a cruel government that would deprive a child, within the above limit as to age, of these attainments, and we do not hestitate to say that compulsory education to a certain standard would be the most desirable that could be added to our statutes or imbedded in our constitution.

One of the most repugnant features connected with the present condition is the fact that able bodied and indolent fathers are willing to see the little souls committed to their care, drag out a toilsome early life, rather than work themselves. What kind of parental care is that, that takes from his tender child the flowers and sunshine of childhood, and in their stead impose upon him a tread-mill drudgery that will bend his form, break his health and consign him to a life of slavishnesss in body if not in disposition, and what can be said of a government that will not interfere to save him from the avarice of those who work him, and the cruelty and indolence of those who make him work?

No nobler motive can be named than the one upon which the defeated law was based, and the great heart of Alabama could throb with no nobler impulse than that which would compel protection to objects of that law.

Maternal Impressions.

Superstitions die hard, as we see illustrated in the recurring reports in medical journals of children marked or deformed through a fright by the pregnant mother. So strong are the superstitious beliefs

some men import when they begin the study of medicine that they are incapable of casting them off, notwithstanding the teaching of physiology or chemistry or anatomy. Anatomists tell us that there are no nerves connecting the uterus and placenta—that there is no direct communication betweeen the blood vesssels of the uterus and placenta. We know that the eggs of the fishes grow to maturity outside the body of the female, without care or supervision. We have constantly seen the eggs of fowls hatched under any environment that supplies sufficient heat, air and moisture. We know from naturalists that the Marsupials expel their young from the uterus in a very immature stage, to complete their development in the pouch. In the cases of fishes and fowls there can be no possible connection between parent and offspring after impregnation, and during the period of foetal development. In the case of Mammals, of which Man is the highest type, the foetus finds lodgment in the uterus in normal cases—in abnormal ones, in the tubes, and subsequently in the peritoneal cavity. Here, whether in uterus or in peritoneum, the ovum develops by virtue of the life forces inherent in it—without further aid from the mother than the necessary nourishment, heat and oxygen.

Embryology demonstrates that the human foetus in its nine months of uterine development, rehearses in miniature, the different stages of ancestral development that required countless ages in the unfolding. First, the stage of the area vasculosa and the heart of a single tube—corresponding to the fishes. Then the allantoic, corresponding to that of the birds. Then the placental. Every analogy points to the support of the supposition that in the earliest stage, the ovum lives temporarily on its own contained pabulum as its prototype, the fish ovum, continues to do. As it grows, constantly inclosed in its membrane, it absorbs nutriment from the mother host without forming any direct communication. As the chorionic and placental circulations are successively developed, the separation, nervous and circulatory, is maintained to the last. That ovum of the bird impregnated by the spermatazon and inclosed in its nutritive pabulum carries all its inheritance, only awaiting a proper environment for development. So the impregnated human ovum carries, from the time of impregnation, the potential inheritance that will evolve into actual inheritance under proper nutritional environment. Every analogy points to the position that, except by vitiating the supply of blood—the pabulum of the foetus—the nervous condition of the mother host cannot affect that foetus.

The physical condition of the maternal host affects through improper or vitiated blood food the growth—the unfolding of the foetus.

A virus, syphilitic or other, may passs through the protecting membrane and infect the foetal blood. It is easily comprehensible how bacilli circulating in the maternal blood might pass, but not so nervous impressions where there are no nerves to conduct them. What physician of experience but can recall instances of pregnant women, irascible or grief stricken or bowed down with disgrace, who have brought forth children displaying the sunny, cheerful dispositions transmitted to them at and through impregnation? External conditions may mar the child or youth, but all the latent possibilities date from the moment of impregnation.

"Yea, the first Morning of Creation wrote
What the Last Dawn of Reckoning shall read."

P.

Disease and Viciousness.

From the New York Medical Journal we get the following clipping, and are inclined to the opinion that if more of "red-eyed bums" in cities were thus handled it would have a good salutary effect:

A well-known English judge had before him on one occasion a person charged with shoplifting. The judge's demeanor showed very clearly that he was not in sympathy with the effort of the prisoner's counsel to excuse his client on the score of irresponsibility. "Is your lordship aware," asked the counsel, "that there is a disease known to physicians by the name of kleptomania?" "Perfectly," replied the judge, "and I am sent here to administer a drastic remedy for it." Because the tendency to habitual drinking is often a disease, it does not therefore follow that it is not frequently merely a vice. The authorities at Bellevue, it seems, are beginning to comprehend this, and, in the case of chronic "repeaters" who "get on a jag" with the consciousness that it will be worked off in the comparative comfort of a good bed in the alcoholic ward, shelter from inclement weather, and a sufficiency of square meals, have determined henceforth to transfer all such offenders to the police authorities for more suitable and adequate treatment. One "patient" already has been transferred to "the island" for six months. This is as it should be, save in cases in which careful observation shows collateral evidence making indisputable the defect of irresponsibility.

About the best medicine which can be given to a poor and unfortunate drinking drunkard is discipline—kindly enforced, but enforced.

Surgery and the Hypodermic Syringe.

The increase in the use of morphine with its well-known results is becoming a very serious question for the physician—and the Medical Brief clearly sets forth some facts which should be honestly and conscientiously studied by every practitioner:

Surgery has made wonderful progress in the last twenty years, with the result that the doctor is often tempted to make the knife the short cut out in disease complications.

Surgical operations pay handsomely, as compared with medical treatment. They give the doctor reputation, and an opportunity to utilize his skill and knowledge effectively. There is less difficulty in collecting a bill for surgical work. The results are definite, tangible, and, in a way, final.

But surgery, with all its improvements, can never take rank with medicine. It is our ignorance of materia medica and therapeutics, our impatience, and the ignorance of those we treat, which makes us resort to surgery to cut the Gordian knot, rather than spare the time and labor to untie it.

It is the same with the hypodermic syringe. We come to a patient who is suffering pain, and loudly calling for relief. We do not know exactly what is the matter. We are very busy, and in a hurry. A little morphia will quiet the patient temporarily. Out comes the little syringe, and we give him or her a shot.

In all callings, to be succesful, conscience must rise above expediency. In medicine, the patient's welfare must be the doctor's first consideration. No man should try to practice medicine who does not hold this point of view. No cynics, skeptics, pessimists, are wanted.

Do not make a practice of giving your patients hypodermics of morphia to hush them, or of cutting out the offending member until you have exhausted what medicine can do for them. Do not take it for granted that there is no other way until you have tried all you know, and see that you keep fresh in your mind the indications for medicines; get reliable preparations, know the varying effects produced by different sized doses, and are familiar with therapeutic procedures to control pathological conditions.

A case in point: A man came in at evening, very tired and hungry. Ate heartily. In an hour, complained of severe abdominal pain, which became agonizing. Symptoms all pointed to intussusception. He was placed in a bath as hot as could be borne, to which hot water was added from time to time. Hot water was given him to drink, and repeated hot enemas used. Suddenly, the patient felt the obstruction give way, and in five minutes was sleeping quietly.

Reliance on morphia might have wasted valuable time, and an oper-

ation cost him his life, to say nothing of long confinement, loss of time, etc.

If the physician will keep his knowledge of disease expressions, pathological principles and their treatment fresh in his mind, by constantly reviewing them, by making special studies of drug properties on his own account, he will attain such aptness in diagnosis, and such familiarity with the resources of therapeutics, that he will seldom need the hypodermic syringe, and surgical means will be the court of last resort.

A RELIABLE TREATMENT FOR CHRONIC BRONCHITIS.

It is only within comparatively recent years that the medical profession has been able to assert positively that chronic bronchitis can be successfully treated without frequent discouraging recurrences of the attack. The key to the solution was found in the final proof that thedetermination and treatment of the cause was essential to complete relief. A permanent cure is questionable unless the primary cause is removed, and this may find its origin in tuberculosis, kidney trouble, disorders of the heart or infiltration of the connective tissues of the lungs with air. Coupled with the necessity for a permanent cure is found the desire for a remedy that will accomplish the desired result quickly. In this latter respect advanced medical research has brought to light a contributing remedy that is of the utmost value. Cod liver oil has always been regarded highly by the profession in chronic bronchitis, but an obstacle was encountered by reason of the frequent tendency of the oil to upset the stomach and defy digestion. In Scott's Emulsion this stumbling block has been removed and the approved treatment of chronic bronchitis can now be followed literally by reason of the ease and safety with which Scott's Emulsion can be taken by the patient. There is an element of risk attached to the use of cheap and often unreliable emulsions of cod liver oil, that physicians will do well to guard against. The tendency of such preparations to lose their value by the separation of the different ingredients and the frequent use of inferior hypophosphites and spices, is sufficient reason for the careful practitioner to avoid them.

In using and prescribing Scott's Emulsion there is no uncertainty as to the qualityof the article, nor is there the slightest doubt relative to its efficiency or the uniformity of its preparation. Scott's Emulsion has, moreover, the advantages of a food-medicine, being a direct contributor of nourishment to the blood and tissues during its treatment of chronic bronchitis.

Miscellaneous Notes.

Dr. Ed Drennen has been on the sick list the past week.

Dr. R. P. Huger, of Anniston, contributes an interesting article for this issue of the Journal.

Dr. B. L. Wyman furnishes a very interesting clinical report for this issue of the Journal.

We will give the readers of the Journal in next month's issue at least a synopsis of the Medical legislation which may have been passed at the present session.

Now for the State Medical Association. Every doctor in the State of Alabama should help to make the meeting at Selma the best in the history of the association.

The best "Bracer" in this country is the firm of G. W. Flavell & Bro. See adv., and whenever you have occasion to brace weak parts, write to them for Elastic Stockings, Trusses and Supporters, etc. From "The Medical World."

Dr. Thomas W. Ayers, Anniston, will start with his family for China, sailing from San Francisco, March 15. He goes out as a medical missionary under the auspices of the Southern Baptist Board, and will be stationed at Hwang Hi-en, North China.

Hillman Hospital, Birmingham, has appointed the following medical staff: Medical—Drs. Cunningham Wilson, Thomas D. Parke, Baxter Rittenberry, John W. Barclay, Charles Drennen and Robert V. Mobley, Surgical—Drs. Benjamin G. Copeland, William P. McAdory, Charles Davis, William H. Wilder, Edward P. Riggs and Lewis C. Morris.

The demand for sample copies still come in, despite our several efforts to kill off this crowd of vagrant doctors. If some of these fellows had to do the work necessary to get out one issue of the Medical Journal, aside from the financial outlay, they would send $2.00 and take the Journal, read it, and be fair to say the least of it.

Dr. Richard Beverly Cole died at San Francisco, aged 72 years. He will be pleasantly remembered by the profession as the President of the

American Medical Association during its meeting at Atlanta in 1896. Dr. Cole was a native of Virginia, and had long been one of the notable figures in the medical profession of the western section of the country.

A bill for the protection of physicians and surgeons from blackmail and unjust malpractice suits is also to be introduced this session. Its most important provision will be the requirement of a bond from any one bringing a suit against a physician for alleged malpractice. This bond is to be forfeited in case the judgment goes against him. This idea is based on a somewhat similar provision in English law.—Medical News.

Hagee's Cordial of Cod Liver Oil with Hypophosphites of Lime and Soda is the remedy for Grippe. It restores health, and has the further effect of curing the disagreeable post-grippal symptoms so often seen. Thus, night sweats, loss of weight, and the entire train of nervous symptoms, such as intestinal neuralgia, headache, brain fag, eye strain, etc., quickly yield to its action. It is pleasant to take, efficent in action, and a great builder of all the tissues.

Gonorrhea, Gleet and Leucorrhea.—Kennedy's White Pinus Canadensis gives perfect satisfaction in gonorrhea and gleet; have used it in cases within the last six months that resisted all other remedies. Have also used it successfully in cases of leucorrhea and ulceration of the os uteri. I am highly pleased with its effects, and certainly recommend it to the profession. The White is preferable—leaving no stain on the clothing.—J. R. Wilcox, M. D., Colorado Springs, Colo.

Budwell's Emulsion of Cod Liver Oil in combination with the Iodides of Arsenic, Calcium and Manganese has gained the most favorable consideration from the medical profession, and is being extensively prescribed. It is a combination which the most sensitive stomach will tolerate and is one of the most reliable preparations as an alterative and tonic. Physicians who give it a trial in the treatment of cases where it is indicated will not be disappointed in results.

The editor of the Medical Mirror speaking of the deposed editor of the Phidadelphia Medical Journal, indulges in some rather plain criticisms. He says: * * * * "In passing I am reminded of an observation made by that great humorist and philosopher, Josh Billings, viz: Whenever you see a man who is too full of himself, don't tap him, but plug him up, and let him choke to death or 'bust.'

"It seems that someone in the ranks of medical journalism is 'busted.'"

THE TREATMENT OF COUGHS.

To M. H. SMITH, Chemist,

68 Murrray St., New York.

My Dear Sir—I feel justified in congratulating you for the excellency of your preparation Glyco-Heroin (Smith). I have used it extensively during the past year, and I have unmistakably found its action prompt and beneficial in all cases of phthisical and bronchial coughs. It is gratifying to remark that Glyco-Heroin (Smith) lacks that nauseating sweetness which accompanies most of the cough remedies. From my personal experience, I recognize it as a specific in relieving all irritaitng coughs, and I hope your successs will be as great as the relief the poor consumptives receive from it.

Believe me, yours respectfully,

G. MICHON, M. D.

The Martin H. Smith Co. will supply samples and literature of this valuable preparation to all physicians requiring the same. See their advertisement.

MAKE A CROSS MARK

To remind you
There is something
You have neglected
For the last ten years.

You should attend to it.
Concerning your home and family.
A most important duty.
Don't dream over it longer.

A PIANO

Is not a luxury. Every prominent educational institution in the world considers music perfectly essential to a young lady's cultivation and refinement. It is a better ornament than fine clothes and lasts longer. Don't cost any more either.

AN ORGAN.

There is no cause for a man who will not buy his family a musical instrument. A good piano may be bought for one-fourth of what a toneless little spinet used to cost. An organ is as easy to buy as a one horse farm wagon.

Hundreds of instruments sold in your own State.
Hundreds of testimonials from your own neighbors.
Write for FREE LITERATURE and read up on Pianos and Organs.

E. E. FORBES,

26 Dexter Avenue, Montgomery, Ala.

New catalogue of Violins, Mandolins, Guitars, etc., just out.
Sole agents for Phonograph Records that won't break.

At a recent meeting of the good people of this city, held at the First M. E. Church, South, in the interest of the Hillman Hospital, more than $6,000 was subscribed to the building fund—four physicians helped to swell the amount, Dr. E. P. Riggs subscribing $100 and Dr. G. C. Chapman $50, Dr. J. W. Barclay $20 and B. L. Wyman $20. Physicians are liberal as a rule and are willing to give to any worthy enterprise, but in this instance, many of our doctors insist that they give to the poor who go to the hospitals—their time and skill and services which if valued in money would soon amount to more than the most liberal contributions in money.

In one hospital in the city of Philadelphia 129 physicians give one year of their time and skill to the poor, which, if calculated on a moderate fee, would be valued at over $500,000. We would be glad to see the good women in charge keep a correct account of all the charity work done by the 200 doctors of Birmingham, allowing the usual fee—for one year—as a matter of simple justice to the profession.

ALETRIS CORDIAL

RIO CHEMICAL CO.
St. Louis, Mo., U. S. A.

Aletris Cordial

Is an emmenagogue, not abortifacient. It cures congestion of the uterus and ovaries, and favors the occurrence of the menstrual discharge. It is also especially appropriate when the amenorrhea depends upon anemia. It regulates menstruation, and is useful in all the derangements of menstruation, namely, amenorrhea, dysmenorrhea and metrorrhagia, provided these disturbances be idiopathic. By curing menstrual disease, a common cause of sterility, it will also cure the sterility. It is also recommended in erosion of the cervix and vulvar eczema.

THE GENERAL PRACTICIAN.

He meets the list of human ills from alpha to omega,
And the gamut of the social world from millionaire to beggar;
He flagellates the new-born babe in state of cyanosis,
And feels the senile pulse-beats of arteriosclerosis:
And so life's phases and extremes in his daily rounds prosaic,
With varied tints commingling form a medical mosaic.

He knows disease just now depends on toxins and bacteria,
So when he meets an old-time foe, a genuine diphtheria,
He uses antitozin and is very much elated,
To find that the bacilli are as dead as if cremated;

On a case that looks quite similar he tries this special serum,
Then hears a faint microbic voice that seems to whisper near him,
"Just try again, my honored friend, if you really wish to knock us,
No bacillary crowd are we, we belong to the streptococcus."

He meets a friend in counsel and to his opinion yields,
One whose knowledge of the subject has been gained in special fields;
Remembering the learning as well as skill of hand,
That specialism only and its students can command;

But as they ever multiply it sometimes seems to me,
There is danger of his being lost in this specialistic sea,
And that on some future morning he'll awake at early dawn,
And find that, like Othello, his "occupation's gone."

He accepts with doubtful gratitude fractures simple and compound,
Knowing embryo malpractice suits in such are often found;
While in many of these cases, here I think you will agree,
Though Roentgen rays may show the fracture, even they can't find
the fee.

He discovers tones and murmurs and rales however small,
That exist throughout the viscera within the thorax wall;
And beside the many heart sounds his stethoscope may hear,
Are the sounds that are spoken from the heart to his sympathetic ear.

He keeps in touch with recent lines of treatment and technique,
Knowing he who ceases study must the rearmost column seek;
And despite the lack of special skill and extra erudition,
Finds still demand for the general and up-to-date practician.

—J. B. McGee in Cleveland Journal of Medicine.

A NOTABLE DISTINCTION.

The current number of the Canadian Journal of Medicine and Surgery, which is one of the representative journals of Canada, contains an article which is perhaps one of the most scientific ever written upon the subject of the treatment of bronchitis. All the various methods of treating this affection are discussed in detail and their merits compared; numerous formulae of the official drugs of the Pharmacopoea are also suggested. There is, however, but one proprietary remedy mentioned as being of sufficient value to merit distinction. This remedy is Angier's Petroleum Emulsion and the wrter states that it is of specific value in affording prompt relief from the symptoms of inflammation of the respiratory tract. Cough is promptly checked, expectoration made easy and free from effort and the sensations of irritation and inflommation in the chest are almost immediately abolished.

The writer of the above article states that these beneficial effects of Angier's Petroleum Emulsion are noted even in the chronic obstinate forms of bronchitis and that this remedy may be relied upon to effect a cure.

HIGHER STANDARDS FOR MEDICAL EDUCATION.

The University of Pennsylvania, at the beginning of the present school year, adopted a curriculum embodying four years of exclusively medical study. This new curriculum has just been adopted by the State Medical Council, at its winter meeting, as the standard for Pennsylvania. Under this newly adopted standard the applicant for admission to a medical college must have attained a high degree of general education, and he will not be admitted to advanced standing in the medical school on the ground that he has, for instance, studied anatomy in an art school, or chemistry in an electrical school. The fact that ninety or more applicants out of about 250 were rejected last September in the university examinations is taken as an indication that the new curriculum is to be lived up to, in spite of its immediate financial drawbacks. About ninety per cent. of these unsuccessful applicants have been admitted to other schools, a fact which is regarded as a thing that cannot occur again under the State's new standard. The attorneys-general of all the States in the Union have been made interested in a movement to make the standard of medical training in Pennsylvania, or its equivalent, the standard of other States. After lengthy correspondence between the Pennsylvania Medical Council and the medical boards of other States, a bill in Congress is now proposed extending the elevation of the medical standard throughout the United States.—New York Medical Journal.

Society Reports.

NEW YORK ACADEMY OF MUSIC—SECTION ON ORTHOPAEDIC SURGERY.

Meeting of Jan. 18, 1901.

GEORGE R. ELLIOTT, M. D., Chairman.

Dr. Homer Gibney presented a girl aged 17 years, tall, with a round back or posterior curve of adolescence of which he exhibited a tracing. He had applied the plaster jacket she now wore, only a few hours before, by placing her in the recumbent position, the body resting upon two uprights—one under the pelvis and the other under the point of greatest prominence of the back. Her head and shoulders were allowed to sag backwards and downwards. The position maintained which caused the patient some suffering, was a marked over-correction. Another jacket would be applied later. The patient did not bear the operation well, on account of cardiac complication.

Dr. Henry Ling Taylor said he had not understood what diagnosis had been made, but the girl seemed unusually tall for the age assigned, and asked if the possibility of gigantism had been considered, as a marked round back was common in such conditions.

Dr. Royal Whitman said he was familiar with the history of the patient. She had some cardiac disease, was rickety, overgrown and badly nourished. He considered her condition merely the round spine of adolescence partly due to her height and heart weakness, and called attention to the patient showing lack of ordinary intelligence.

Dr. George R. Elliott asked Dr. Gibney how much force in pounds he had used to correct the deformity.

Dr. Gibney replied that little force beyond gravity was used, the sagging of the body between the supports appeared to give the necessary extension.

Dr. W. R. Townsend said that he had put up a case of spondylose rhizomelique last week in a much straightened position followed by a feeling of relief to the patient.

Dr. Taylor remarked that Kietley had described anterior crutches to hold the shoulders back, which would seem to answer the purpose of epaulettes as used in this jacket, without their disadvantages.

EPICONDYLAR FRACTURE OF THE ELBOW.

Dr. Homer Gibney presented a small boy who had sustained a fracture of the elbow three months previously. The fracture was above the condyle. When the patient presnted himself at the hospital the elbow was

fixed at an angle of 105 degrees with but littlt movement. The joint was cut down upon by Dr. V. P. Gibney and the detached fragment sutured into place.

Dr. V. P. Gibney said the epicondyle and nearly the entire condyle had been displaced, interfering with motion. He had cut down upon the joint and separated it with an osteotome, cleaned off the site of the fragment and pushed it down suturing with kangaroo tendon; he then put the arm in a straight position, left it for four or five weeks and then allowed active motion. Passive motion was not employed.

Dr. T. Halsted Meyers commented upon the excellent result and remarked that children were often allowed to go on with fracture at the elbow united in poor position in the belief that they would outgrow the disability in great degree which was true, but it was better to correct the deformity entirely even resorting to open operation when necessary. He called attention to Dr. Lloyd's excellent reports.

COXA VARA.

Dr. Townsend presented a boy aged 14, with the history that three years ago, without apparent cause, began to limp and noticed that one leg was a little shorter than the other. The condition increased and he has had some pain. There was one inch of actual shortening. Radiographs were shown. He diagnosticated coxa vara of the ordinary type. He said there were two points to note; one, good flexion and extension with little adduction; the other, the smaller size of the limb.

Dr. Townsend showed another skiagraph of a patient in which he had made the diagnosis sometime ago of coxa vara. In this case under observation for three years there had been a progressive shortening of about 1-8 to 1-4 inch each year, now amounting to 3-4 inch.

Dr. Whitman called attention to the importance of the limitation of motion, that although the patient still retained 10 per cent. of abduction, there was an apparent shortening of two inches. This shortening and consequent disability was due to the limitation of abduction. This deformity might be overcome, after preliminary stretching of the contracted muscles, by a cuneiform osteotomy at the base of the trochanter which would re-establish the angle of the neck and thus relieve the strain upon it. He advised this operation in Dr. Townsend's patient, though the best results were to be looked for in younger patients, or at an earlier stage of the deformity.

Dr. Elliott asked Dr. Whitman how large a wedge of bone he would remove.

Dr. Whitman suggested cutting a paper model of the bone as shown in the skiagraph, and measuring on that the size of wedge to be cut out; he thought one with a base of 3-4 of one inch would be sufficient in the patient under discussion.

Dr. Elliott asked if the length of the limb would be much increased.

Dr. Whitman replied that the actual increase in length would be slight, possibly 1-2 inch; the important point was that there would be no apparent shortening because there would be complete relief of the limitation of motion which caused the apparent shortening.

Dr. Townsend said he had performed the operation referred to by Dr. Whitman in two cases with good results and saw no reason why it should not be done in this case. I one patient, however, a little girl aged 7 years, who had slight coxa vara, he had applied a traction splint and did not see in this particular case why it was not as good as the osteotomy advised by Dr. Whitman. He thought apparatus worn for a few years would give good results in the mild cases.

Dr. Meyers agreed with Dr. Townsend that it would be better in the beginning of these cases to use some sort of supporting apparatus that would not need bandage or plaster, thus avoiding pressure atrophy. He thought the Campbell brace especially adapted for such cases. It removed part or all of the body weight and was inconspicuous.

Dr. V. P. Gibney asked just what the Campbell brace was.

Dr. Meyers illustrated it by a drawing showing it extending to the hip.

Dr. Gibney asked if the Campbell brace had always extended to the hip as drawn by Dr. Meyers.

Dr. Meyers said that it had for the last eighteen years.

Dr. Taylor said that this brace reminded him of the Dow's brace which was valuable when it was desirable to use a perineal crutch and allow motion at the knee. He cited cases which had done well under the use of the hip splint, but could not give final results as the patients had not returned after treatment was discontinued. He had recently seen a case of coxa vara in consultation when four out of six surgeons consulted were in favor of the splint treatment.

Dr. Whitman did not favor the use of apparatus as a routine treatment, believing that after its discontinuance the distortion was likely to increase. The nutrition of the parts was likely to be lessened rather than increased by the use of braces. He had been disappointed in the final effect in cases in which apparatus had been used. Finally, braces could not rectify the deformity, at best would but relieve the symptoms and check progress. His operative results had been satisfactory. The patients after operation did not limp. Nearly all of his operative cases were between the ages of six and ten years.

Dr. Townsend asked if the boy in question would walk perfectly if the adduction were overcome.

Dr. Whitman said if there were no limitation of abduction, the boy would walk almost perfectly, whatever limp persisted would depend upon the actual shortening.

Dr. Elliott wished to know what would be the prognosis if the case was left untreated.

Dr. Whitman replied that the patient would not get much worse, might get some better; as a rule, after the more acute symptoms had subsided the patients adapted themselves to the deformity and got along very well with a greater or less degree of limping. He stated that several of the German writers were apparently opposed to either mechanical or operative treatment.

Dr. Louis A. Weigel, of Rochester, N. Y., thought apparatus might be used to advantage in the earlier stages of coxa vara for the removal of superincumbent weight which is an etiological factor. He believed the difference in size of the femora as shown in the radiographs was due to a true atrophy or arrest of development. If coxa vara is due to defective nutrition, development of the affected side would be retarded.

FRACTURE OF THE NECK OF THE FEMUR.

Dr. Townsend presented a man 19 years of age who in December, 1899, fell a distance of 40 feet, striking on his hip. A diagnosis of contusion was made at the hospital to which he was taken where he remained in bed six weeks, at end of which time he could not walk except with the aid of crutches. He came to hospital of Ruptured and Crippled in April, 1900, and a diagnosis of fracture of the neck of the femur was made. There was one inch of shortening, inversion of foot, crepitation at site of fracture when movements were made. Extreme pain and inability to bear weight on the limb or lift it from table when lying on his back. A long traction hip brace and a high shoe were applied and worn for six months. The man can now walk with little or no pain, and when lying on his back can raise his leg nearly as well as on the sound side. There is one inch of shortening, no crepitation at hip and all motions are possible without pain. Dr. Townsend thought traumatic coxa vara could be applied to this case.

Dr. Meyers thought the case very encouraging. He had presented a similar case sometime ago where bony union had been secured after four months of non-union. In all cases of fracture of the neck of the femur, an earnest attempt to get bony union should be made. In recent cases even in old people with proper splints we would succeed many times. In old people where there had been fracture without real immobilization for many months the case was not hopeless under proper treatment.

Dr. Weigel exhibited a radiograph of an unusual deformity of the tibia and fibula, following a probable fracture during infancy. The mother had noticed a slight angle middle 1-3 of tibia when child was three months old. This had increased. The original fracture may have occurred in utero.

Dr. Weigel also presented a series of radiographs showing congenital

absence of bones in members of the same family. In the five extremities shown, some bone of the hand or arm was absent. In one case, there was a rudimentary humerus, an imperfect thumb and three fingers. The mother had no thumb and gave a history of having born twelve children, four of whom were deformed. The mother attributed her own deficiency to maternal impression, stating that her mother while pregnant was shocked by seeing a man at her house without a thumb.

Dr. Weigel exhibited another radiograph of a case of extensive osteomyelitis involving the whole of the tibia on one side. The patient had been treated for articular rheumatism. He thought it possible in most cases to make the differential diagnosis between marked suppuration and thickening or eburnation. When there is pus formation he stated that in a radiograph it is difficult to get a clear definition of bone structure on account of the osteoporotic condition usually present.

Dr. Weigel also exhibited a radiograph of a tubercular focus in a child's foot together with another radiograph taken two months later, showing the repairative process already well under way. This patient was treated by fixation and rest, any radical surgical interference being contraindicated.

Dr. Townsend asked for a differential diagnosis between sarcoma of bone and esteomyelitis.

Dr. Weigel said that such a differential X-ray diagnosis might be difficult to make without an opportunity of comparing a series of cases.

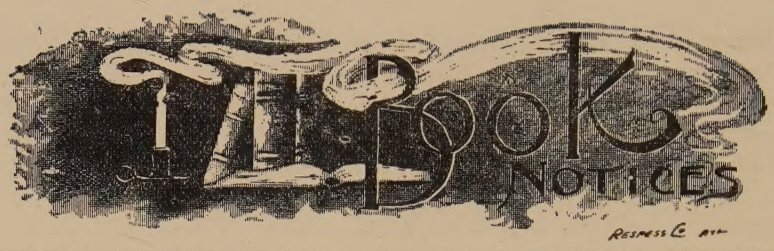
Dr. Elliott showed a skiagraph of congenital dislocation of the hip which was taken after only fifteen seconds of exposure. The shortness of time exposure was important. With restless children long exposure was often impossible without an anaesthetic.

Auto Chemical Co., St. Louis, Mo., Gentlemen—Allow me to express my appreciation for the "Auto Toxide" in a case of neuralgia of the womb, which was of eight months standing and had baffled and resisted all (other) treatment from other physicians, and as she consulted me I prescribed "Auto Toxide," a tablet (5 grains) to be taken night and morning for one week, and to report to me when she needed other treatment. She says she needs nothing more and is perfectly well and needs no other treatment.

I also prescribed it in a case of articular rheumatism with insomnia, and in due time it acted like a charm.

Success to "Auto Toxide."

W. T. Milstead, M. D., Lyon, Miss.



OBSTERIC CLINIC. By Denslow Lewis, Ph. C., M. D. Professor of Gynecology in the Chicago Policlinic; President of the Attending Staff of Cook County Hospital, Chicago; President of the Chicago Medical Examiners' Association; Vice President of the Illinois State Medical Society; Ex-President of the Physicians' Club of Chicago; Consulting Obstetrician to the Florence Nightingale Home; Senior Gynecologist and Obstetrician to the Lakeside Hospital, Chicago; Late Special Commissioner from the Illinois State Board of Health and the Health Department of Chicago for the Investigation of Municipal Sanitation in European Cities.

A series of thirty-nine clinical lectures on practical obstetrics delivered to students and practitioners in Cook County Hospital, Chicago. Together with remarks on criminal abortion, infanticide, illegitimacy, the restriction of venereal diseases, the regulation of prostitution and other medico-sociologic topics. Octavo, 640 pages. Price $3.00. E. H. Colgrove, 65 Randolph Street, Chicago.

MODERN MEDICINE. By Julius L. Salinger, M. D., Demonstrator of Clinical Medicine, Jefferson Medical College; Hematologist to the Jefferson Medical College Hospital; Pathologist to the Lying-in Charity Hospital, Philadelphia; Assistant Pathologist to the Philadelphia Hospital. And Frederick J. Kalteyer, M. D., Assistant Demonstrator of Clinical Medicine, Jefferson Medical College Hospital; Hematologist to the Jefferson Medical College Hospital. Octavo, pp. 801. Illustrated. Philadelphia and London: W. B. Saunders & Co. 1900. Price, cloth, $4.00 net.

Modern Medicine is up-to-date in all that is essential, but so practical and carefully condensed as to make it one of the most desirable books on the practice of medicine yet published—to illustrate instead of having to wade through long pages of fine spun theory as is the case in many of the recent publications—12 pages are given to typhoid fever and 21 to tuberculosis. The author brings out the following facts:

"In the present era, the practice of medicine includes the study of a number of specialties, such as physical diagnosis, bacteriology, the

examination of the gastric contents, the urine, the blood, the feces, etc. Hence it has frequently been necessary for the student to procure separate books upon these topics. For this reason it has appeared advisable for the authors to combine in one volume, as far as possible, the essentials of these branches, as applied to Clinical Medicine.

"The arrangement of the special topics has been adopted to prevent repetition, to present as concise a description of allied subjects as possible, and to link more closely the various divisions. Thus, the pathogenic germ of a special disease is considered under the head of Clinical Bacteriology, rendering it unnecessary for one already acquainted with such facts to again read the morphology, the biology, the pathogenesis, etc., when dealing with the description of the disease. But if the reader is unfamiliar with the subject, such facts will be found in the section that deals with the micro-organisms that are of importance in clinical medicine.

"A similar course has been followed in regard to physical diagnosis, examination of the sputum, of the stomach contents, of the blood, of the urine, of the feces. The aim of the authors has been to give the main facts in regard to etiology, pathology, symptomatology, diagnosis, prognosis, and treatment as considered from a modern and generally accepted standpoint. The most modern medical works in English, German, and French have been freely consulted."

TREATISE ON DISEASES OF THE NOSE AND THROAT. By Ernest L. Shurly, M. D., Vice President and Professor of Laryngology and Clinical Medicine, Detroit College of Medicine; Laryngologist and late Chief of Staff, Harper Hospital; Consulting Laryngologist, St. Mary's Hospital, etc. Octavo, pp. xvii.—744. Illustrated. New York: D. Appleton & Company. 1900.

The author wastes very little time on anatomy and physiology of the nose and throat, but gives enough for practical purposes. His cuts and illustrations are all new and give clear and definite ideas of the surgical relations of the tissues under consideration. The author seems to have very clear cut ideas and gets at the gist of his subject in a very concise and impressive way. He seems to get at the practical things and in his detail work he is especially clever.

The book is certainly the most suitable one for beginners in laryngology and for general practitioners, that the reviewer has yet seen. It does not take for granted that the reader possesses already a knowledge of the many minor points in the diagnosis and treatment of diseases, which go to make up the successful laryngologist, nor is it verbose. Says just enough and to the point and treats of the author's personal experience and views, rather than filling up the space with compilations. The individuality of the author is stamped on every page of the book.

S. L. Ledbetter, M. D.

ANOMALIES OF REFRACTION AND OF THE MUSCLES OF THE EYE. By Florel B. Tiffany, Kansas City, Mo.

We do not agree with the author when he states that his book is filling a need, as it contains nothing new or startling in its effects that would tend to place it in a conspicuous place in Ophthalmic literature. It is merely a rehash of the subject of the text generously gleaned from the text-books, literature, and present knowledge at our command, with a few personal remarks and suggestions in the author's own style. At the same time, when we consider that an enormous percentage of our cases are due to some error of refraction, or disorder of the ocular muscles, we cannot have too much said on the subject provided the saying be tried and true, and after reading every line in the book I believe the writer has dealt well with the subject. The book is nicely gotten up, contains about 300 pages on good paper, and well printed in large, clear type. The first part contains plates of reproduced photographs of Helmholtz, Donders and Landolt, with short biographies of these men who have made Ophthalmology what it is today. Also contains the usual chapters and charts on physics of the reflection and refraction of light. The refracting optician will find something he ought to know and the student of Ophthalmology something he will have to know.

Stubbs.

THERAPEUTICS: ITS PRINCIPLES AND PRACTICE. By Horacio C. Wood, M. D., LL. D. (Lafayette, Yale), Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System, in the University of Pennsylvania; Member of the National Academy of Science. Eleventh edition. Remodeled and in greater part rewritten by Horacio C. Wood and Horacio C. Wood, Jr., M. D., Demonstrator of Pharmaco dynamics in the University of Pennsylvania. Philadelphia and London: J. B. Lippincott Co., publisher, 1900. Price, $5.00.

The index of diseases in the first part of the book and one of the first things which attract our attention, adds no little to the value of the book. This is the eleventh edition of Prof. Wood's work and has been mostly rewritten and brought up to date in all essential particulars. The article on Massage clearly set forth the importance of this treatment. The chapter on how to prepare food for the sick, is one of practical importance. The Treatment of Corpulence is fully described. Some space is given to the Treatment of Exhaustion and Neurasthenic Conditions.

The various drugs and medicine are discussed—electricity, heat, cold, etc., are all considered. The book is one which the student and practitioner will find to be very useful and in many respects, superior to more pretentious works. We especially commend this book to the favorable consideration of our readers.